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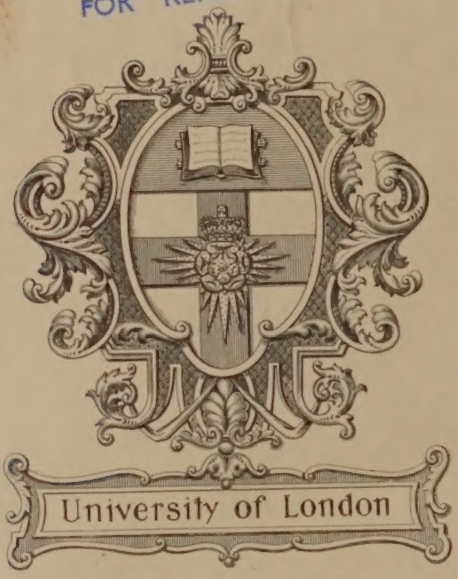

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REPORTS

FROM

COMMITTEES:

SIXTEEN VOLUMES.

—*(16.)*—

PLYMOUTH BREAKWATER; CONNAUGHT LAKES;
PUBLIC WORKS (IRELAND);
LEITH HARBOUR; SALMON FISHERIES;
REGENT STREET PAVING.

Session

19 *February*——10 *September* 1835.

VOL. XX.

1835.

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1835.

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REPORT

FROM

SELECT COMMITTEE

ON

PLYMOUTH BREAKWATER;

TOGETHER WITH

MINUTES OF PROCEEDINGS,

THE MINUTES OF EVIDENCE,

AND APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
10 *September* 1835.

Mercurii, 19° die Augusti, 1835.

Ordered,

THAT a Select Committee be appointed to inquire into the circumstances attending the Contract for Limestone entered into with the Admiralty by Messrs. Scott, in the year 1835 :—And a Committee was appointed of—

Mr. Warburton.	Mr. G. F. Young.
Lord Ashley.	Mr. Wallace.
Mr. Charles Wood.	Mr. G. R. Robinson.
Lord Viscount Lowther.	Mr. Bonham Carter.
Admiral Sir Charles Adam.	Mr. Hawes.
Mr. Alderman Thompson.	Mr. Thornely.
Sir Robert Price.	Mr. Bonham.

Ordered, THAT the Committee have power to send for Persons, Papers and Records.

Ordered, THAT Five be the Quorum of the Committee.

Ordered, THAT the Petition of Silas Pearse, presented on the 17th of August, complaining of the Conduct of the Captain Superintendent of His Majesty's Dock-yard at Plymouth, in relation to the Contract for the Supply of Limestone, and which was ordered to lie on the Table, be referred to the Committee.

Jovis, 10° die Septembris, 1835.

Ordered, THAT the Committee have power to report the Minutes of the Evidence taken before them, together with the Minutes of their Proceedings, to the House.

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REPORT.

THE SELECT COMMITTEE appointed to inquire into the circumstances attending the CONTRACT for LIMESTONE entered into with the ADMIRALTY by Messrs. *Scott*, in the year 1835; and to whom the Petition of *Silas Pearse*, complaining of the conduct of the Captain Superintendent of His Majesty's Dock-yard at *Plymouth*, in relation thereto, was referred; and who were empowered to report the MINUTES of their PROCEEDINGS, and the MINUTES of the EVIDENCE taken before them, together with their Observations thereon, to The HOUSE:——HAVE examined the Matters to them referred; and have agreed to the following REPORT:—

THE Admiralty having determined in January last, that no larger sum should be expended on the Plymouth Breakwater during the current year, than would employ the workmen already belonging to that Establishment; Captain Ross, the Superintendent of Plymouth Dock-yard, pursuant to Admiralty Order of the 28th of January, issued advertisements for tenders for the supply of a quantity of stone, sufficient to proceed with the work in the manner directed; viz. for 8,000 cubic feet of wrought granite, and 30,000 cubic feet of wrought limestone. The contract was placarded by hand-bills, and advertised in four provincial newspapers, from the 4th of February to the 17th, and tenders were directed to be given in at the office of the Superintendent of the Dock-yard by 12 o'clock on the latter day. Samples of the stone, the measurement and other particulars, and the form of tender, were exhibited, pursuant to advertisement, at the office, in Oreston, of Mr. Stuart, Superintendent of the Breakwater.

787. and App. No. 1.
App. No. 2.
1279.
App. No. 2.
App. No. 1. & 4.

Subsequently to the former determination of the Admiralty, respecting the quantity of work to be done at the Breakwater, *i. e.* on the 11th of February, the Board came to a decision to apply £. 10,000, instead of £. 5,000, to carrying on the undertaking during the current year; and in apprizing Captain Ross of their intention, they directed him to cause a contract for materials to be made forthwith; and a similar notice was given by the Admiralty to Mr. Stuart. This notice was received at Plymouth only five days before the day fixed for receiving the tenders. Mr. Stuart then suggested to Captain Ross and Mr. Dent, the clerk in Captain Ross's office, the propriety of asking every person who came to tender, at what price he would agree to double the quantity of stone; but it was finally determined, as no positive order had been received to contract for the double quantity, to proceed to receive tenders on the 17th, as was at first intended, and afterwards to advertise for fresh tenders.

789.
App. No. 6.
App. No. 7.
509. 1922 to 1924.
1925, 1926.

On the 18th of February, Mr. Stuart first forwarded to the Admiralty an estimate of the expenditure of the £. 10,000, to be voted for the construction of the Breakwater, wherein he proposed that about 16,000 feet of granite, instead of 8,000, and 60,000 feet of limestone instead of 30,000, should be contracted for. Between the 13th and the day of tendering, he communicated to Mr. Edward Scott and to Messrs. Sparrow and Simons, the intentions of the Admiralty to use double the quantity of stone. The two latter parties, it is to be observed, were, in some measure, identified in interest with Mr. Scott, as in case of his obtaining the contract, he had offered to give them a portion of it. Mr. Stuart does not distinctly remember to

1901, 1902.
App. No. 10.
494. 509. 515 to 526. 530. 541. 556. 1939. 1944, 1945. 503 to 507. 530. 1951, 1952. 567, 568. 614. 1597 to 1602.

1916. 1919. 1953 to 1955. 62 to 66. 1379. 1384. 1461. 1463. 1570. 1719. 1722. 1723. 1942, 1943. 65. 532. 540. 562. 1948.

have given, before the 17th of February, this information to any of the other parties that afterwards tendered; and many of these, it is certain, were not aware of those intentions of the Admiralty on the day of bidding. It is to be regretted that this information was not communicated generally to all the parties tendering, since, owing to the expense of purchasing gear being the same, nearly, for the smaller as for the larger quantity, an abatement in price could have been afforded by parties contracting for the double quantity.

Nine parties, whose names, and the conditions of their several tenders, are given in the following Table,

[*See the Table at the bottom of the page.*]

appeared in person, or by agent, to tender on the 17th. Eight parties out of the nine delivered in tenders before the hour prescribed, 12 o'clock; among these

19. 469. were Silas Pearse and Mr Edward Scott. One party, however, out of the nine, Mr. John Johnson, having announced to Mr. Scott and to others his intention of

604. 769. 1449. 476. 1447. 476, 477. 580. 1449. delaying to tender until after 12 o'clock, (on this allegation, amongst others, that Mr. Dent had informed him, that he might do so) Mr. Scott and others of the parties went to remonstrate with Captain Ross against the granting of any such indulgence, observing, that "it did not appear exactly fair for Mr. Johnson not to tender at the same hour; that, at least, there would be an appearance of unfairness in it." To this Captain Ross replied, "that he saw nothing unfair in the matter;

476, 477. 1451. that he had not, in former contracts, been in the habit of closing the box precisely at 12; that he should receive tenders from any body until the time stated by Mr. Dent;" and he acceded to a proposition made to him by Mr. Scott, that all

477, 478. 584. parties might take their tenders out again, or put in fresh ones, if they pleased. It is not clear what parties, besides Scott and Johnson, were present (Silas Pearse

478. 1571. denies that he was so) at this conversation. While most of the parties were yet

24. 30 to 40. 45. 1371. 484. in the Dock-yard, expecting to hear the result of opening the tenders, and probably about two o'clock, Mr. Scott applied to Mr. Dent to have his tender returned, according to the permission which Captain Ross had given. It appears also that,

33. 37. 44. 1373. at the same time, Mr. Dent offered to return to any of the other parties, who might

33, 34. 40, 41. 43. 484. apply for them, their tenders. To this Mr. Pearse objected, saying, "that it would not be fair," when Mr. Scott rejoined, "that he would deliver in another tender."

770. 1425. 1450. 698 to 700. 887. 942. 943. 946. 951. The result of this discussion was, that Johnson, about half-past 12 o'clock, as he states, delivered in a tender; and that Scott, about two o'clock, after the box into which the biddings were thrown, had been carried in, delivered in a second tender. The biddings in these tenders will be found in the Table above referred to.

On the course taken by the Captain Superintendent in extending the time of bidding beyond the stated hour, Your Committee are desirous of offering a few remarks.

	TENDERS DELIVERED IN BEFORE 12 O'CLOCK					
	FOR GRANITE ONLY:			FOR LIMESTONE ONLY:		
	Brockenshire & Son.	Trenery & Son.	Elliot & Spargo.	B. Sparrow.	P. Simons, jun.	Silas Pearse.
Granite dove-tailed Bonding-Stones:						
1. Delivered at the Breakwater	s. d. 2 1	s. d. - - - 2 -	s. d. 1 11½	s. d. - -	s. d. - -	s. d. - -
2. Delivered at Catwater	2 3	- - - 2 -	- -	- -	- -	- -
Granite Mould-Stones:						
3. Delivered at the Breakwater	1 9	not above 35 ft. cube 1 6½; above 35 ft. cube 1 11½	1 11½	- -	- -	- -
4 Delivered at Catwater	1 11	not above 35 ft. cube 1 6½; above 35 ft. cube 1 11½	- -	- -	- -	- -
5. Limestone	- -	- - - -	- -	- 11½	- 11	8 4 p' ton

remarks. The motives of Captain Ross in doing so, as stated by Mr. Hancock, senior clerk in Plymouth Dock-yard, to Mr. James of the Contract Office, Somerset House, in a letter dated 11th August, were certainly not improper motives:— "With regard to tenders being admitted after the prescribed time, the Captain Superintendent directs me to observe, that though the time fixed was 12 o'clock, it is possible that tenders may have been received after that hour; as the practice is, to defer opening them for a short period, in order to avoid the slightest ground for disappointment or complaint; but it is an invariable rule not, on any pretence, to receive a tender, after the others have been opened."

It appears however to Your Committee, that when conditions are prescribed by one party to others, those conditions should be observed on both sides; that to break the condition of closing the biddings at the time of which notice has been given to the public, without the consent of all the parties who tendered within the time, is not to deal fairly with them; that according to the course which, it appears, was followed on the 17th of February, no proof was given to the parties tendering that no new tender could be, or had been received, after the others had been opened; and that such a course is calculated to excite a suspicion of improper partiality in the minds of the competitors; as actually happened, indeed, in the case of Scott, Pearse, Roberts and others. 53. 1371. 1389.

The tenders delivered in on the 17th of February, viz. two from Messrs. Scott, and one from each of the eight other parties, were forwarded by Captain Ross on the same evening to the Board of Admiralty; by whom they were referred, on the morning of the 19th, to their Civil Architect, Mr. Taylor, that he might make an abstract of the tenders, in order to show which was the most advantageous. On the morning of the 20th, about a quarter past 11, Mr. Taylor received these tenders, and reported on them within an hour afterwards, writing upon his report in red ink, "An abstract is preparing." About half-past one o'clock he delivered to the Board his abstract of the tenders: but in preparing it, he altogether omitted the tender of Messrs. Johnson, for limestone, at 8*d.*; for which omission he accounts by saying, that "usually different parties have tendered for limestone to those who have tendered for granite; and I appear to have turned over Johnson's, supposing it as applying only to granite." It should be observed upon this, that no less than four (including this of Johnson's) out of the ten tenders which were referred to Mr. Taylor, were tenders for both limestone and granite. Had this offer of Messrs. Johnson been inserted in the abstract, it would have stood above Pearse's, and below Scott's. 790. & Hancock's Letter. 1056. 1100, 1101. 1102. 1057. 1142. 1146. 1147.

Mr. Taylor reported on those ten offers, "That Johnson's is by far the most reasonable offer for granite; but he has only filled in the items, 'as delivered at a convenient wharf at Catwater;' and has struck out of his offer, 'or upon the Breakwater.' Silas Pearse's offer for limestone is the lowest, viz. 8*s.* 4*d.* per ton;" and, in his abstract of the tenders, he appended to Pearse's price of 8*s.* 4*d.* per ton 1057. 1058 to 1060.

ON THE 17th OF FEBRUARY 1835.		TENDERS delivered in after 12 o'clock, 17th February.		TENDERS delivered in 20th February.	PRICES in CONTRACTS taken by Messrs. Scott.
FOR GRANITE AND LIMESTONE:					
H. Macintosh.	Messrs. Scott, 1st Tender, 17th February.	Messrs. Johnson.	Messrs. Scott, 2d Tender, 17th February.	Messrs. Scott, 3d Tender, 20th February	
s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
- - - - 2 -	2 -	- -	1 11 ⅓	1 10	1 10 ½
Wharf provided by Crown - - 2 1 D° - by Contractor 2 3	2 2	1 6	2 1 ½	1 11 ⅓	2 -
- - - - 1 11	1 8 ⅓	- -	1 8 ⅓	1 7	1 8 ⅓
Wharf provided by Crown - - 2 - D° - by Contractor 2 2	1 10 ½	1 6	1 10 ½	1 9	1 10
- - - - - 10 ½	- 9	- 8	- 8 ¾	- 8	- 8

ton, the words, " about 7 *d.* per cubic foot." The Committee will presently revert to this report.

See above page 3.

The Committee have now to state the circumstances attending the delivery of a third tender by Messrs. Scott, subsequent to the day on which the biddings were made. Informed by Mr. Stuart of the increased supply of stone that the Admiralty would require, and having obtained from a foreman of Pearse, named Pinch, presumptive evidence of the price at which Pearse had tendered, Mr. Edward Scott, on the morning of the 19th, set out for London, with the intention of making an amended tender of the entire quantity of stone required by the Admiralty. On the morning of the 20th, between 10 and 11 o'clock, he called at the Admiralty, and sent up to Mr. Dawson, by one of the porters in the hall, an urgent note, requesting to see him immediately; but that note did not contain any remark, that would remind Mr. Dawson who Mr. Scott was. After waiting about two hours without seeing Mr. Dawson, he called at the Contract Office, on Mr. James, with whom he had once before made acquaintance through the introduction of Mr. Stuart, in order to inquire whether his tender had been accepted. He brought in his hand a specification from Mr. Stuart, similar to that contained in the contract; and he made mention, whilst in Mr. James's office, of an amended tender which he had made or was going to make. Mr. Scott believes that the new tender, which he afterwards left at the Admiralty, was written or copied by him, while staying in Mr. James's office. Mr. James had not seen the tenders, and referred Mr. Scott, for information, to Mr. Taylor, at the Admiralty. Between one and half-past one o'clock, Mr. Scott called on Mr. Taylor, to whom, he said, he had been referred for information by Mr. James. He begged to know whether the contracts had been decided: produced a sealed letter addressed to Mr. Dawson, containing an amended tender, which, he said, had been too late for delivery at Plymouth; and begged to know whether it could be received. This happened near the end of the Board, on the 20th, about the time when Mr. Taylor is usually called in. Mr. Taylor replied, that Mr. Scott, if desirous to send in another tender, must do so without loss of time. Being called at the moment into the Board, he said that he could not inform Mr. Scott whether the amended tender would be received or not, but that he would take the letter up to the Board. This he did, and, handing it to Mr. Dawson, observed, " that a person had brought another tender." After his abstract had been delivered in, the letter was brought out directly by Mr. Dawson, opened, and read at the Board; and it was left to the Board to decide, whether it should be received among the tenders. After reading this letter, Mr. Taylor's abstract was read at the Board, in his presence. Mr. Taylor was not asked, whether this letter would occasion any alteration in his report; nor any other question respecting the new tender. It was never referred to him officially; he never reported upon it, nor did he, in consequence of its reception, make any addition to his former report. How the Board dealt with it, he was not informed; nor, until lately, did he ever see any thing more of that and the other papers.

612. 898 to 900. 915,916.918. 1576. to 1579. 1635. 610. 644. 645. 960. 967. 1614. 1611, 1612. 1613; 666. 1682. 1690. 810. 1306. 875. 968. 875. 1163. 1167. 1286. 1173. 1288. 1604 to 1609. 875. 1110. 1706. 876. 1096. 1703. 1107. 1126. 1703. 876. 1704, 1705. 1703. 1094. 1097. 1110. 1153. 1103. 1707. 878. 1703. 1097. 1110. 1153. 1703. 1714. 1703. 1711. 1712. 1701. 1702. 1703. 1711. 1097. 1110. 1703. 1708. 1710. 1698. 1700. 1709. 1714. 1713. 1131. 1138, 1139, 1140. 1132. 1135. 1710, 1711, 1712. 1088. 1708. 1712.

After quitting Mr. Taylor, Scott called, about two o'clock, upon Sir James Cockburn, who felt exceedingly obliged to Mr. Scott for the great assistance he had afforded to his brother, Sir George Cockburn, at the late election for Plymouth. Scott stated that he had waited, without success, two hours to see Mr. Dawson, and was anxious to know whether his tender had been received. Sir James Cockburn proposed to go with Scott to the Admiralty, that he might see Mr. Dawson, and obtain the information he required. Scott accepted the proposal, conceiving that Mr. Dawson had not given him an interview, from not being aware what Scott it was that had applied; he went with Sir James Cockburn, conceiving that Mr. Dawson would then know that Mr. Scott who tendered was Mr. Scott the brewer, the supporter of Sir George Cockburn, and the voter for Mr. Dawson. They arrived at the Admiralty about half-past two or three o'clock.

1309. 1616. 776,777,778. 1309. 665. 665. 1305, 1306. 1310. 1305. 666. 1682. 1684. 1692. 1680. 1692. 776 to 779. 786. 919. 1309. 1312, 1313. 1352. 1669, 1670, 1671.

Sir James Cockburn believes that, on arriving at the Admiralty, he first entered the room, and explained to Mr. Dawson the object of his visit. Beyond the mention of Scott's name he did not mention who Scott was; he rather thinks Mr. Dawson must have known who Scott was; if Scott had gone in with Sir James Cockburn, he would have shown himself who he was; Mr. Dawson must have been aware that Mr. Scott had been of great assistance to Sir James Cockburn, on behalf of his brother, at the late election. He did not state to Mr. Dawson any reason particularly why he went with Mr. Scott to the Admiralty. He concluded that Mr. Dawson would know that Mr. Scott was a friend of his, or else that he would not have taken the trouble of having gone with him.

646,610. 856. 1119. 1310. 1311. 1314. 1348, 1349. 1311. 1312. 1352. 1359.

Mr. Dawson

Mr. Dawson then desired that Mr. Scott might come in. Sir James Cockburn states, that when Mr. Scott entered the room, nothing more than usual took place. Mr. Dawson bowed, and said, "How do you do, Mr. Scott?" and acted the same as he would to any other person that he had seen before, or was acquainted with; "I should say, certainly he knew him, when he came into the room." 1311. 1334. 1336.

Mr. Scott also states, that when he entered the room, Mr. Dawson recognized him, "certainly, as a friend;" that he had very frequently been in Mr. Dawson's company when at Devonport; and had dined with him, at large parties, in several private houses: Mr. Scott would have expected, on meeting Mr. Dawson in the street, to have been recognized by him as a person he had met before. 1666. 1660. 1664. 1685, 1686. 1665. 1688.

Sir James Cockburn informed Mr. Dawson, that Scott wished to ascertain whether his tenders had been received, and whether he had got the contract. Scott added, that his object was to know, whether his amended tender had arrived in time. Mr. Dawson replied, "he knew nothing about the matter, but the tenders had been read at the Board;" he then rang the bell, and directed the clerk to bring the tenders up. When the clerk had brought them in, Mr. Dawson observed, "Yes, here are the tenders, but the Board has not yet decided upon them." With the other tenders brought in, was Scott's amended tender. Mr. Scott then remarked, "I am all right; my tender must be accepted." 1314, 1316. 611. 637. 883. 1314. 686. 1320. 1314. 618, 619. 611.

Mr. Scott saw the abstract of tenders near enough to read the figure 7*d.* affixed to Pearse's tender at 8*s.* 4*d.* per ton. He explained to Mr. Dawson that this calculation was wrong: that an offer by the ton would admit of dispute; that 12 feet was the customary estimation of the trade, but that engineers calculated 13; he then divided 8*s.* 4*d.* by 12, in order to show what Pearse's tender would amount to per foot, and pointed out that his own tender of 8*d.* per foot, at the rate of 12 feet to the ton, would amount to only 8*s.* per ton. 655 to 658. 1656 to 1659. 1642. 1321. 611. 615. 1321.

Mr. Scott observed, that he was anxious to explain that Pearse had tendered by the ton, whereas the advertisement required parties to tender by the cubic foot. 611.

As Sir James Cockburn and Mr. Scott were retiring, Mr. Dawson inquired whether Scott knew any thing of Pearse's character, and whether he was a man of property. Mr. Scott replied, "that his character was too well known; that he was constantly under arrest by some person or other; and that it was impossible he should fulfil the contract, as he had not the means." 630. 1323. 624. 1322. 626, 627. 622, 623. 632.

Mr. Scott inquired also, during this interview, whether his tender for granite had been accepted; to which Mr. Dawson replied, "that it was then before the Board." 685, 686. 691.

Three or four days after this conversation at the Admiralty, Sir James Cockburn, at Scott's request, had another interview with Mr. Dawson, in order to ascertain whose tender had been accepted; when Mr. Dawson signified, that orders were gone or going to accept Scott's tender. Sir James Cockburn communicated this information to Scott, who understood thereby, most distinctly, that it was his tender for 60,000 feet of limestone, at 8*d.*, that had been accepted. After this, Scott himself had another interview with Mr. Dawson, in order to know whether he had the contract for granite also; and to the granite alone their conversation in this instance referred. He was informed by Mr. Dawson that he had not obtained it; and he knew, before quitting London, that it had been given to Johnson. 671. 1327. 1326. 662. 663. 668, 670. 672, 673. 729. 680, 681. 641. 649. 652. 642. 654. 659. 685. 695. 696.

After this interview he called, for the second time, on Mr. James, to whom he stated, "that he had been down to the Admiralty about his tender, and seemed to complain very heavily of an advantage having been given to Messrs. Johnson, in allowing them to send in their tender after the prescribed time. He thought this so great a hardship, that he had been down to the Admiralty about it; he thought that he had a right to send in another tender." Mr. Scott, in his evidence before the Committee, admitted, that he complained very much that he had not the granite contract, as he thought that he ought to have had it, and had some ground of complaint on account of preference shown to Messrs. Johnson. 1173. 1178. 1180. 1243. 1244. 1285. 697. 772. 1616.

After the reading, on the 20th instant, of Mr. Taylor's abstract at the Board, but on what day or at what time is not certain, Mr. Dawson wrote upon Mr. Taylor's report the words, "Mr. Scott's offer for limestone, in his letter February 18th, is the lowest; he offers it at 8*d.*: send to Somerset House;" and on Mr. Taylor's abstract, in the column containing the prices of Messrs. Scott's second tender, he wrote, "8*d.* ✓ see amended contract 18th February:" putting the mark ✓ opposite to 8*d.* to point it out as the lowest. 1702. 1086, 1087.

It was on the 25th of February, being the Board-day next following that of the 20th, 796. & App. No. 19.

20th, that the Admiralty came to a decision, to give the contract for granite to Messrs. Johnson, and that for limestone to Mr. Scott; and on the same day an order
App. No. 20. in conformity with this minute was forwarded to Captain Ross, informing him that "their Lordships having examined the contracts for granite and limestone tendered for the use of the Breakwater, have decided on giving the contract for granite to Messrs. Johnson, and for limestone to Mr. Scott, to be delivered at Catwater; and Captain Ross, in conjunction with Mr. Stuart, is to enter into the necessary arrangements, and to take proper security."

App. No. 21. An order to the same effect was on the same day forwarded also to Mr. Stuart,
App. No. 22. and notice of the transmission of the order to Captain Ross was on the 27th of
1232. February sent to the office of the Storekeeper-general, to which the Contract Office
797. & App. No. 23. is subordinate. On the 27th of February, Captain Ross applied to the Admiralty, in consequence of their directions of the 25th, to be pleased to return to him the tenders of the parties, Messrs. Johnson and Mr. Scott, and also to furnish him
1184. 1232. & with two blank stamped forms of contract and bond for execution; and on the
App. No. 24. 2d of March, pursuant to this application, Mr. Innes, of the Admiralty, transmitted certain tenders of Johnsons and Scott to Mr. James, requesting him to forward them by that evening's post to Captain Ross, together with the forms in blank, as required.

1185 to 1187. The tenders transmitted from the Contract Office on the 2d of March were, 1st, that of Messrs. Johnson for granite and limestone; 2dly, the second tender of
799, 800. Messrs. Scott for granite, and for 30,000 feet of limestone at $8\frac{5}{4}d.$ per foot; and
1230. 3dly, the third or amended tender of Messrs. Scott, delivered in at the Admiralty on the 20th of February, viz. for granite, and for 60,000 feet of limestone at $8d.$
688, 689. 704. On the 4th of March, Captain Ross addressed a letter to Messrs. Scott, informing
App. No. 25. them that their tender for limestone had been accepted; and by another letter on
App. No. 26. the 7th he appointed them to attend on the Tuesday following, viz. the 10th,
701, 702, 703. with their surety, to execute the contract and bond. They attending at the Super-
706. 708. intendent's office on the 10th, it appeared that Mr. Dent had prepared a contract
709. 1230. for 30,000 feet of limestone at $8d.$ To this Mr. Edward Scott objected, contending that his offer at $8d.$ was for 60,000 feet, and that if the quantity were reduced to 30,000 feet, the price must be raised to $8\frac{1}{2}d.$ Hereupon, Captain Ross was sent for, when Mr. Edward Scott observed that he was positive that his last tender for 60,000 feet at $8d.$ had been accepted, and requested that the contract might be
709. prepared accordingly. Captain Ross refused to do so, alleging "that he had no positive orders to that effect, since the order he had received from the Admiralty merely stated that the tender of Mr. Scott was accepted, but without specifying which tender; and if there were any mistake, it could be corrected afterwards." In consequence, the contract was concluded on the 10th of March for 30,000 feet at $8\frac{1}{2}d.$

710, 711, 712. A letter from Captain Ross to the Admiralty of the 10th of March merely
App. No. 27. announces the fact of Messrs. Scott having executed the contract for 30,000 feet, according to directions of the Board, on the 25th of February, and signifies the transmission therewith to the Admiralty of the said contract and of the bond, without noticing the question that had arisen between himself and Messrs. Scott, which tender it was that the Board had accepted. But a letter of the same date,
App. No. 28. from Messrs. Scott to the Admiralty, states, that Captain Ross having prepared the bond and contract for the supply of only 30,000 feet of limestone, from a belief that, if their Lordships meant to accept the amended tender for 60,000 feet, they would have distinctly said so, Messrs. Scott thought it better to sign those documents, under the full persuasion that their Lordships would either alter the quantity from 30,000 to 60,000 cubic feet, or direct Captain Ross to make out another contract for the remaining 30,000 cubic feet, which are required for the Breakwater during the present year; and further, they request Mr. Dawson to move the Board to give directions accordingly. On the 12th of
App. No. 29. March an Admiralty minute was passed to inform Captain Ross, that 60,000 feet being wanted, a reference be made to Messrs. Scott, whether they are inclined to supply the additional quantity of 30,000 feet *on the same terms*; and if so, to
801. & App. No. 30. make the contract accordingly; and a letter of the same date from the Admiralty to Captain Ross, after acknowledging the receipt of the contract and bond of the 10th, states, that "their Lordships having received from Messrs. Scott a letter stating their wish to supply 30,000 feet more, which it is understood from Mr. Stuart will be required in the course of the year, are pleased to direct Captain Ross to call upon Messrs. Scott to state, whether they are willing to supply that further

further quantity *on the same terms*, and if so, to extend the contract accordingly." An Admiralty Letter, of the same date, addressed to Messrs. Scott, directed them to communicate with Captain Ross on the subject. App. No. 31.

Pursuant to these directions, Captain Ross, in a letter of the 14th of March, inquired of Messrs. Scott "whether they were willing to supply the further quantity of 30,000 feet on the same terms, or at a lower rate;" to which inquiry Mr. Scott replied by letter, on the same day, that "as our foreman at the quarries had just stated that our workmen had manifested a disposition to follow the example of a neighbouring quarry, and strike for an increase of wages, and we have thought it prudent to grant them a small advance, to prevent the entire stoppage of our works, we do not think that we should at the present moment be justified in naming a less price than before; but we are perfectly ready and willing to supply 30,000 feet more on the same terms as before, which is 1¾*d.* less per foot than was ever paid for any similar contract." 719. 803; App. No. 32. 720. 806; App. No. 33. 721, 722, 723.

Captain Ross writes to the Admiralty on the 15th March, transmitting Messrs. Scott's reply of the 14th, together with the tender, dated 17th of February, of 30,000 feet at 8¾*d.*, and their amended tender for 60,000 feet at 8*d.*, and "suggests, that either Messrs. Scott's contract of the 10th may be amended accordingly; or in case it be necessary that a new contract should be entered into for the additional quantity, that the stamps requisite for that purpose may be forwarded to him." 804; App. No. 34.

On the 18th of March, an Admiralty letter was written to Captain Ross, informing him, that the Board approved of Messrs. Scott's offer for the further quantity of 30,000 feet, and that they had directed the Storekeeper-general to send a new contract and stamps to be executed *for the whole quantity*. On the same day an Admiralty Order, somewhat contradictory to the preceding letter, was sent to the Storekeeper-general, directing him to send new forms of contract to Captain Ross, to be executed by Messrs. Scott, for a further supply of 30,000 feet of limestone, according to the accompanying tender, being that of the 14th of March; and on the 20th of March the Storekeeper-general informed Captain Ross that he "sends stamped forms of bond and contract for an additional supply of 30,000 feet, agreeably to the accompanying tender," being also that of the 14th of March. Pursuant to the Admiralty Order of the 18th, a contract for the whole quantity of 60,000 feet at 8¾*d.* was concluded on the 26th, between Captain Ross and Messrs. Scott; and on the same day the said contract and bond were transmitted by Captain Ross to the Admiralty. 807; App. No. 35. 1195; App. No. 36. 808, 809; App. No. 38. 724. 727. 732. 738. App. No. 46. 811; App. No. 39.

The Committee have already noticed that Mr. Edward Scott, on being informed that he had obtained the limestone contract, conceived that it was the tender for 60,000 feet at 8*d.* which had been accepted; and, doubtless, those were the terms to which it was intended to agree. The contract which Messrs. Scott concluded with Captain Ross on the 26th of March for the same quantity, was at 8¾*d.* The chain of circumstances by which this change in price was effected, without incurring detection at the Admiralty, appears to have been the following:— 672, 673. 729. 1200, 1201.

The Admiralty, in announcing to Captain Ross by their letter, of the 25th of February, that they had decided on giving the contract for limestone to Messrs. Scott, omitted to state which of Messrs. Scott's tenders it was that they had accepted. Captain Ross, in announcing to the Admiralty, by his letter of the 10th of March, that Messrs. Scott had executed the contract for 30,000 feet, did not mention what price had been inserted in the contract, and passed over without notice the discussion that arose, at the time of signing, upon the question, which tender it was that the Admiralty had intended to accept. Messrs. Scott in their letter to the Admiralty of the 10th, though they alluded to that discussion, made no mention of price. Neither the Admiralty by their Minute of the 12th of March, nor in their letter to Captain Ross of the same date, directing him to inquire of Messrs. Scott "whether they were willing to supply the further quantity of 30,000 feet on the same terms; and if so, to make the contract accordingly;" nor Captain Ross in his letter to Messrs. Scott of the 14th, requesting to be informed by them "whether they are willing to supply the further quantity of 30,000 feet on the same terms, or at a lower rate;" nor Messrs. Scott, in their reply of the same date, informing Captain Ross that "they are willing to supply on the same terms, but not at a lower rate," made any specific mention what those terms were.

The letter from the Admiralty to the Storekeeper-general, dated the 27th of February, informing him that the Board had given the contract for limestone to Messrs. Scott, was not accompanied by the tenders, in which case the question might 184.

have suggested itself at the time to some officer in the Storekeeper's department, which of the tenders it was that the Board intended to accept. These tenders were
1188. not transmitted to the Storekeeper's office until the 2d of March, when orders were given to forward them by that evening's post to Captain Ross, nor were they afterwards returned to the storekeeper's office until the 8th of April.

Thus it happened, in consequence of no specific mention of price occurring in the correspondence above referred to, and no direct comparison having been made of the price inserted in the two contracts with that contained in the original tenders, that the change from the tendered price of 8 *d.*, which the Admiralty intended to accept, to that of 8¼ *d.*, which was inserted in the two contracts, escaped detection by the Board, and did not, until a later period, attract the attention any officer in the Storekeeper's department.

The motives which influenced the conduct of Captain Ross in these transactions,
1230. beginning on the 10th of March, and ending on the 26th, are stated in the following extracts from a letter of Mr. Dent to Mr. James, dated the 8th of April: "The tenders were sent for and returned, accompanied by another which had not been seen here before. This bore the reduced rate of 8 *d.*, but stipulated for a double supply of stone, namely, 60,000 feet, which there was no authority here to contract for." After stating the arguments used by Messrs. Scott, on the 10th of March, the letter proceeds; "which arguments, the superintendent considered quite in accordance with his orders; and the contract was concluded on the 10th of March for 30,000 feet at 8¼ *d.*, the rate of the tender for that quantity delivered in at this yard on the 17th of February. On the 12th of March instructions were received from the Admiralty to call upon Messrs. Scott to state whether they were willing to supply a further quantity of 30,000 feet on the same terms; and if so, to extend the contract; and they were accordingly called upon to say, whether they were willing to supply this quantity on the same, or on lower terms, (the fact of the 8 *d.* not having escaped recollection); their reply, 14th March, in effect, "that in consequence of an increase of wages to their workmen, they could only supply the Board on the same terms," was sent to the Board, and followed by Admiralty Order, 18th of March, to accept their offer, and by Storekeeper-general's letter, 20th of March, to enter into contract for the additional supply, agreeably to the returned tender, dated 14th. Consequently the price being the same as in the former contract, it was done on the 26th, and forwarded to the Board. Perhaps the matter will be more clear before you, by the whole of Messrs. Scott's tenders being sent with this; and therefore here they are; you may return them or not as the service requires. In looking at this transaction throughout, you should abstract altogether the tender of the 18th of February, as a document which my chief has had nothing to do with officially; and then the matter will appear in a very clear light. Should there be any misunderstanding in this affair, pray write to me, and say how it can be met or settled. There is an ambiguity about it which I cannot comprehend; but, I believe, adherence to orders will be found the safe plan; and upon this we have acted."

809. Captain Ross himself observes upon the same transactions, "I had no authority then to recognize any thing beyond the tender for the first quantity; and Mr. Scott contended, that unless the first contract was made for 60,000 feet, the price of 8 *d.*, which was regulated by the quantity, could not be recognized either. And I decided, that I knew nothing of any other tender than that one for 30,000 feet, which I had received pursuant to advertisement."

1216, 1217. 1284. 1005 to 1007. 1506, 1507. 1504. 1510. 749 to 758. 949. The discovery of the change of price was owing to accident. The division of the contract for limestone and granite between Messrs. Scott and Messrs. Johnson, had occasioned, about the middle of March, a strike for wages among the workmen employed by the latter at their limestone quarries at Plymouth, and at their granite quarries on Dartmoor. The workmen stated to Mr. John Johnson that Messrs. Scott had obtained 8¼ *d.* for limestone, and compared that price with the price that he had obtained for granite: and they said that Messrs. Scott could, therefore, afford to pay better wages than he could.

1201. 1218. 1524. 1515. 1218. 1531. 1515. 1202. 1219. Mr. John Johnson attended at the Storekeeper's office late in the afternoon on Saturday, the 4th of April, on the subject of his granite contract. A condition for supplying limestone at the price of 8 *d.*, by mistake, though conformably to the tender which Messrs. Johnson delivered in, had been inserted in the contract which they were required to sign. After objecting to the covenants, among other things, that they included both kinds of stone, and declining to sign the contract presented to him for signature, he said, that the limestone had been given to Messrs. Scott

Scott at 8 ¾ *d.*, whereas he had tendered at 8 *d.* Mr. James at first denied this, remembering that the price for limestone in one of Messrs. Scott's tenders was the same as that in the tender of Messrs. Johnson, although he did not remember what that price was. On Mr. Johnson's repeating the assertion, Mr. James retired to compare Scott's contract with Johnson's tender; and on making the comparison he found the assertion to be true. On Monday, the 6th of April, he wrote a letter to Mr. Dent, inquiring whether a mistake had not occurred; and on receiving, the 10th of April, Mr. Dent's explanation, he mentioned the circumstance to the storekeeper, who immediately wrote a note to Mr. Dawson on the subject. It happened that, on the very same day, Mr. John Johnson addressed a letter to the Admiralty, containing, among other things, a complaint that Messrs. Scott's bidding for the limestone contract had been accepted, though higher than his own. Mr. Dawson came to the office the following day, the 11th of April; and on the matter being explained, observed that the price of 8 ¾ *d.* was clearly wrong, and that 8 *d.* a foot was clearly the price intended. In consequence of this explanation, Mr. James sent the contract of the 26th of March to Plymouth, to be altered. Thereupon, Captain Ross applied to Messrs. Scott, who consented to the proposed alteration, the three farthings having been erased from the contract at Plymouth; and consequently, on the 15th of April the contract, so altered, was transmitted by Mr. Dent to Mr. James. In pursuance of the contract, Messrs. Scott at the end of August had delivered about 36,000 feet of limestone.

1515. 1202. 1228. 1225. 1202. 1223. 1203. App. No. 41. 1202. 1225. 1206. App. No. 42.; 1204. 1226. 1228. 1230. 1009. 1206. 1236 to 1238. 1206, 1207. 735 to 740. App. Nos. 43, 44. 742. 1208. 1239. 1207. 743, 744.

Mr. John Johnson having declined to sign the contract presented to him for signature, new tenders for supplying 16,000 feet of granite were advertized for from the 8th to the 21st of April. The whole of the tenders delivered in on the latter day having been forwarded to the Admiralty, the contract for granite, on the terms stated in the last column of the table above given, at an advance in price of 4 ½ *d.* a foot beyond that originally tendered by Messrs. Johnson, was awarded to Messrs. Scott.

1010, 1011.

To lay the grounds for forming a judgment upon the whole of the circumstances relating to this contract, the Committee beg to report, in the first place, that Pearse's tender for limestone was the lowest. That, according to the actual weight of the stone, his tender, when reduced from the ton to the cubic foot, was the lowest, there can be no doubt; since even when the surface of the stone was polished, the average of three specimens, according to Mr. Stuart, gave 13 $\frac{1}{6}$ feet to the ton; and the cubic foot of limestone produced by Mr. Pearse from his quarry, which was more finely dressed than the stone for the Breakwater is required to be, gave 13 $\frac{51}{100}$ feet to the ton. According to the evidence of Mr. Pearse and Mr. Roberts, and of Mr. Scott's own foreman, as stated by Mr. Taylor, 13 feet are considered as actually going to the ton; and according to Mr. Scott himself such is the usual estimate of engineers. But Mr. Taylor states, that the average of Plymouth limestone, according to general opinion, is 14 feet to the ton. The tender of Pearse at 8 *s.* 4 *d.* per ton when reduced to the cubic foot, at the rate of 13 feet to the ton, would be at the rate of nearly 7 ¾ *d.* per cubic foot.

1982, 1983. 1473. 1565, 1566. 1587. 1588. 1978, 1979. 1469. 1980, 1981. 1063. 1065. 1070. 1393. 27. 206. 611. 1321. 1067. 1071. 29. 1072.

Against this mode of reducing Pearse's tender from the ton to the foot, it has been contended by Mr. Scott, that 12 feet to the ton is the established rule, according to the custom of the trade of Plymouth; and that Pearse, in tendering at so much a ton, intended to avail himself of that rule, which would have brought his tender to 8 ⅓ *d.* per cubic foot. It appears that the custom referred to, is rather a regulation adopted for settling the wages of the quarry-men by their employers, than one in use for the sale of wrought limestone by limestone merchants to those who deal with them; but no such custom, unless expressly referred to in the terms of the contract, would relieve a person contracting by the ton from being bound to deliver the actual weight. Pearse himself says, that he intended to have delivered 13 feet to the ton; but if these terms in Pearse's tender were subject to any ambiguity, and that tender was in other respects a fit one to be received, it should have been referred to the regular officers of the Admiralty, after the doubt had been raised, to ascertain by inquiry of Pearse, or otherwise, what was the proper interpretation to put upon Pearse's tender, as regarded the reduction of the ton to the cubic foot. It appears that no such reference was made to Mr. Taylor, the civil architect of the Admiralty, in London, nor to Captain Ross or Mr. Stuart, at Plymouth.

207, 208. 210. 759 to 768. 889. 909 to 911. 1392. 1474. 1486. 1991, 1992, 1993. 1471. 1475. 1394. 27, 28. 67. 70, 71. 80. 199. 203 to 206. 1569. 1133 to 1137. 1333, 1334.

Another objection was made by Scott to Pearse's tender, that it was informal, as not following the directions given in the specification exhibited at Mr. Stuart's office, to tender by the cubic foot. This objection also, it appears to the Committee,

should have been referred by the Board to their regular civil officers, to be properly examined and reported on by them. Mr. James, of the Contract Office at Somerset House, stated to the Committee, that had such an informality occurred in tendering for a contract in London, after speaking to the Board, he
1263. would have desired the tenderer, if in attendance, to conform to the terms pre-
1269. scribed; if not in attendance, he would have suggested a reference to the civil architect. If the offer were ascertained, at the time, to be much more advan-
1270, 1271, 1272. tageous to the public than other offers, it would not be rejected on the ground of informality. If the civil architect had reported, that owing to difference of opinion on the number of feet to the ton, he was not able to determine that
1269. 1275. point with precision, the tender would have been rejected; but not otherwise. If neither the tenderer nor the civil architect were in attendance, the tender
1263. would be rejected; because it would then be impossible to compare the tender with others, from not knowing the specific gravity of the stone. Mr. Stuart
1995. also states, that he would not have taken the tender at all, unless the tenderer
1083. had explained it. Mr. Taylor, the civil architect says, if the form of tender and specification had been laid before me, with the advertisement, I should have remarked that the tender was not delivered in according to the specified form.
1085. If I had been asked my opinion, I should have said that the tender was inadmissible, unless the party was at hand, so that they could call him in.

The last objection made by Scott to Pearse, in answer to an inquiry made by Mr. Dawson, was, that owing to pecuniary difficulties, and the want of means, he would not be able to perform the contract. The origin of this inquiry having been a petition presented by Mr. Silas Pearse, complaining of injustice on the part of the Admiralty, in not awarding to him the contract, the Committee felt themselves obliged, however unwillingly, to make inquiries respecting his pecuniary circumstances; and they are compelled to report, that although Mr. Pearse has
9 to 100. 219. never been a bankrupt or insolvent, and has now, as he states, surmounted those difficulties in which he was involved some time ago, yet at the time of making
2027. 2031. the tender, his financial embarrassments were such as, if represented to the Admiralty through proper channels, and found to be true upon due investigation, would have justified the Admiralty, although his tender was the lowest, in forbearing to award to him the contract: because your Committee conceive,
2051, 2052, 2053. that in a matter regarding an undertaking of so peculiar a nature as the Breakwater, the Admiralty, to diminish the risk of interruption or injury to that work, were bound to consider as indispensable a punctual execution of the contract; and, therefore, were not to overlook a circumstance so materially bearing on the punctual performance of the engagements, as the pecuniary means of the person offering to become the contractor.

The Committee, however, are of opinion that this and the two former objections, coming as they did from Scott, a rival competitor, if received from such a quarter at all, should have been received with the utmost suspicion; and referred to the regular officers of the Board, to undergo the most jealous investigation. They are of opinion, that when Mr. Scott, in company with Sir James Cockburn, had an interview at the Admiralty with Mr. Dawson, Mr. Dawson was aware who Mr. Scott was; but whether this was the case or not, they do not regard it as a practice to be approved, that a principal officer of any public board, employed to act for the public in awarding contracts, should grant private audiences to parties proposing to contract, through the medium of private intercession; and at such audiences should permit such parties to recommend their own offers, see the biddings of a rival competitor, and make comments in depreciation of such
2032. competitor's tenders, credit and character. No reference was, in this case, made to the regular officers of the Board of the objections raised by Mr. Scott to Pearse's tender, and to his character, as a man of business. The very propriety of receiving Messrs. Scott's third tender may well be doubted, since receiving it was at variance with the Admiralty Orders addressed on the 11th of February to Captain Ross and Mr. Stuart, directing them to cause a contract to be made forthwith for the extended supply of materials required for the current year; and with the invariable rule observed, as is stated, at all tenderings at Plymouth, not, on any pretence, to admit a tender after the other tenders have been opened. It was owing to the irregularity of the transaction, that the terms agreed upon with Scott differed from those first inserted in the contracts; and it was the result only of a fortunate accident that the public, in consequence, did not suffer loss.

PROCEEDINGS OF THE COMMITTEE.

Mercurii, 19° die Augusti, 1835.

SELECT COMMITTEE appointed to inquire into the circumstances attending the CONTRACT for LIMESTONE entered into with the Admiralty by Messrs. Scott, in the year 1835.

Mr. Warburton.	Mr. Alderman Thompson.	Mr. Bonham Carter.
Lord Ashley.	Sir Robert Price.	Mr. Hawes.
Mr. Charles Wood.	Mr. G. F. Young.	Mr. Thorneley.
Lord Viscount Lowther.	Mr. Wallace.	Mr. Bonham.
Admiral Adam.	Mr. G. R. Robinson.	

Power to send for Persons, Papers and Records.
Five to be the Quorum.
Petition of Silas Pearse, complaining of the conduct of the Captain Superintendent of His Majesty's Dock-yard at Plymouth, in relation to a Contract for the supply of Limestone (presented 17 August)——referred.

Jovis, 20° die Augusti, 1835.

THE Committee met.

Present:—Lord Ashley.	Mr. Thorneley.	Mr. Warburton.
Mr. Bonham Carter.	Mr. Hawes.	Lord Lowther.
Mr. Wallace.	Mr. Bonham.	Sir Robert Price.

Mr. Warburton called to the Chair.
Petition of Silas Pearse read.
The Committee deliberated upon the course of their proceedings.
Witnesses ordered to attend—
Mr. William Johnson, Wednesday next, Twelve o'clock.
Mr. Silas Pearse,
Messrs. Edward and Robert Scott,
Captain Charles B. H. Ross, R. N. C. B., on Tuesday next, at Twelve.
Messrs. Scott to produce any correspondence or tender, or copies thereof, for the supply of limestone for the Plymouth Breakwater, in the present year.

Martis, 25° die Augusti, 1835.

THE Committee met.

Present:—Mr. Warburton.	Mr. Thorneley.	Lord Ashley.
Mr. B. Carter.	Mr. Wallace.	Lord Lowther.
Sir R. Price.	Mr. Bonham.	Admiral Adam.
Mr. C. Wood.		

Mr. Silas Pearse examined.
Mr. Bewes, a Member of the House, examined.
Mr. Scott examined.
Return of Order respecting Mr. Silas Pearse, read from the Admiralty.
Captain Charles Bayen H. Ross, C. B. Superintendent of His Majesty's Dock-yard at Plymouth, examined.

Mercurii, 26° die Augusti, 1835.

The Committee met.

Present:—Mr. Warburton.	Mr. Bonham.	Mr. Hawes.
Mr. Bonham Carter.	Mr. Thorneley.	Mr. Wallace.
Lord Lowther.	Mr. Charles Wood.	Sir R. Price.
Lord Ashley.	Admiral Adam.	

Captain Ross re-examined; delivered in documents.
Mr. Scott re-examined.
Mr. G. L. Taylor examined.
Mr. John James examined.
Mr. Taylor and Mr. J. James put in the several tenders for limestone and granite.
W. Johnstone, of Exbury House, Hampshire, examined.
Mr. G. L. Taylor examined.
Mr. J. James examined.

Jovis, 27° die Augusti, 1835.

THE Committee met.

Present:—Mr. Warburton.	Mr. Bonham.	Admiral Adam.
Lord Ashley.	Mr. Charles Wood.	Mr. Hawes.
Mr. Bonham Carter.	Mr. Thorneley.	Sir Robert Price.
Lord Lowther.	Mr. Wallace.	

The Chairman read a letter from the Right honourable G. R. Dawson.
The Committee deliberated.
Mr. James re-examined.
Sir James Cockburn examined.
Mr. Thomas Roberts examined.
Mr. John Johnson examined.
Captain Ross examined.
Mr. Pearse re-examined.
Mr. John Phipps examined.
Mr. Scott ordered to attend To-morrow at Twelve o'clock.
Adjourned.

Veneris, 28° die Augusti, 1835.

THE Committee met.

Present:—Mr. Warburton.	Mr. B. Carter.	Mr. Thorneley.
Lord Ashley.	Mr. Bonham.	Mr. Wallace.

Mr. Edward Scott examined.
Mr. G. L. Taylor examined.
Mr. Hugh Ross examined.

Lunæ, 31° die Augusti, 1835.

The Committee met.

Present:—Mr. Warburton.	Mr. Wallace.	Mr. Bonham.
Lord Ashley.	Lord Lowther.	Sir Robert Price.

Mr. Wilson (Agent to the Duke of Bedford) examined.
Adjourned to To-morrow at Twelve o'clock.

Martis, 1° die Septembris, 1835.

THE Committee met.

Present:—Mr. Warburton.	Lord Ashley.	Lord Lowther.
Mr. Bonham.	Mr. Wallace.	Sir Robert Price.

Mr. Sweet (Sheriff's Officer) examined.
Mr. Collier, M. P., examined.
Mr. William Stuart, Superintendent of Plymouth Breakwater, examined.
Documents delivered in by Mr. Bonham.
Mr. Silas Pearse re-examined.
Mr. Sweet re-examined.
Adjourned to Monday at One o'clock.

Lunæ, 7° die Septembris, 1835.

The Committee met.

Present:—Lord Ashley.	Mr. Thorneley.	Sir R. Price.
Mr. Bonham.	Mr. Wallace.	Mr. C. Wood.
Lord Lowther.		

Mr. Warburton not attending, Lord Ashley was called to the Chair.

The Committee having waited some time, and many Members of the Committee having a pressing engagement this morning,—

Motion made, That the Committee do now adjourn until To-morrow at Twelve o'clock, which was put, and agreed to. Adjourned.

Martis,

Martis, 8° die Septembris, 1835.

THE Committee met.

Present:—Mr. Warburton.	Lord Lowther.	Mr. Hawes.
Lord Ashley.	Mr. C. Wood.	Sir R. Price.
Mr. Bonham.	Admiral Adam.	Mr. Thorneley.
Mr. Bonham Carter.		

Proposed Report read.

Motion made, That it appears by the evidence taken by this Committee, that Mr. Silas Pearse was a person in embarrassed circumstances, whom it would have been imprudent to trust for the due performance of the contract for supplying limestone to the Plymouth Breakwater.

That it appears by the evidence taken by this Committee, that Mr. Silas Pearse has been six or seven times under arrest for debt; that he was under arrest only 15 days before he sent in his tender for supplying limestone to the Plymouth Breakwater, in February last, and that he has been twice under arrest since; namely, in April and in May.

That Mr. Silas Pearse appears to have discharged several old debts immediately previous to coming before the Committee, to which debts he was liable when he made the tender.

That though the specification of the contract for limestone was in feet, Mr. Pearse made his tender at so much per ton, which rendered the terms of his tender liable to confusion and dispute.

That the tender of Mr. Pearse was not the lowest, except upon the supposition that there are 13 cubic feet of dressed limestone to the ton, a supposition contradicted by all the evidence that has been taken as to the custom of the port of Plymouth.

That Mr. Pearse had not the means of supplying the stone from his own quarries, 150 cubic feet being all he could raise by the week, and 850 feet being the amount required; that he must therefore have purchased stone in order to fulfil his contract, and that he was not in circumstances to do this with certainty.

That it is the opinion of this Committee, that it was the first and principal duty of the Board of the Admiralty to make the best bargain it could make for the public; and that under the circumstances of the case, as it appears in evidence before the Committee, with the known fact of the embarrassment of Pearse's affairs, the most advisable course was the course taken, namely, to accept Mr. Scott's tender; and that this Committee does not hold that it is always incumbent on a public Board to accept the lowest tender made to it for the execution of work, but that consideration should be had of the means of the party to fulfil the contract.

That it does not appear to this Committee, that sufficient clearness has been preserved in this instance, in the mode of transacting the business which the Committee has had to inquire into; and the Committee recommend, that means should be taken to ensure a greater degree of method and certainty in future.

That it does not appear that Mr. Pearse produced any evidence to prove that he had been in the habit of dealing in limestone on the calculation of giving 13 feet to the ton.

That his tender is not in accordance with the specification, and therefore could not with propriety be compared with those whose calculation was fonnded on the specification.

Amendment proposed, instead thereof, That the Chairman's Report be again read, paragraph by paragraph.

Question put, as amended.

The Committee divided.

Ayes - - - - - - - - -	6.
Noes - - - - - - - - -	3.

Report read, and agreed to.

LIST OF WITNESSES.

Martis, 25° die Augusti, 1835.

Mr. *Silas Pearse* - - - p. 17
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MINUTES OF EVIDENCE.

Martis, 25° die Augusti, 1835.

HENRY WARBURTON, ESQUIRE, IN THE CHAIR.

Silas Pearse, called in; and Examined.

Silas Pearse.

25 August 1835.

1. WHAT are you?—A limestone merchant.
2. Where do you live?—Oreston, in the parish of Plymstock, Devon.
3. Do you carry on any other business?—I am a farmer as well.
4. Are you a farmer now?—I am; and I have an interest in some shipping.
5. Where is your farm?—Close to my limestone works at Oreston.
6. Are you a farmer and grazier?—Yes.
7. How much land, as a farmer, do you rent?—I rent about 35 acres; I have 32 acres of my own land.
8. That is 67 altogether?—Yes.
9. Grazing land, principally, is it?—About half grazing land.
10. Of whom do you rent the land?—Of his Grace the Duke of Bedford.
11. How long have you been tenant of his Grace for that land?—Eighteen years.
12. Did you, in the course of the month of February, see any advertisement for limestone for the supply of the Breakwater at Plymouth?—I did.
13. Is No. 1 a correct copy of the advertisement you saw?—Yes, decidedly so.
14. Did you see it in the Plymouth and Devonport Herald?—I did, and in other papers.
15. Was that for the supply of 30,000 cubic feet of wrought limestone, or thereabouts?—Yes.
16. Does the advertisement specify whether the tender is to be made at so much per foot, or at so much per ton?—It does not.
17. Did you make a tender for the supply of this quantity of limestone?—I did.
18. Does the advertisement specify that the tenders are to be made on the 17th of February, and not later than twelve o'clock on that day?—It does.
19. At what time did you attend to deliver your tender?—I was in His Majesty's Dock-yard at eleven o'clock, and delivered it about a quarter before twelve.
20. To whom did you deliver it?—To one of the porters at the Commissioner's office.
21. What is his name?—Gilbert.
22. Is that at the Commissioner's office in the Dock-yard?—Yes.
23. Did you see other persons attend on the same day to make a tender?—I did.
24. What other parties did you see, either principals or agents, attend?—I saw Messrs. Sparrow & Simmons; I saw Mr. Roberts, agent to Mr. Macintosh; I saw Mr. Scott.
25. Which Mr. Scott?—Mr. Edward Scott; and I saw Mr. Elliott, from Penryn, who tendered for the granite; all the others, but him, were for the limestone.
26. At what price did you offer to deliver the limestone?—Eight shillings and four-pence per ton.
27. How many cubic feet of limestone go to the ton?—Thirteen.
28. Did you make your computation, that 13 feet of limestone go to the ton?—Yes; that was agreeable to my ideas on the subject that I tendered.
29. How much per cubic foot of wrought limestone would the price of 8*s.* 4 *d.* per ton bring the price to, per foot?—Seven-pence three farthings.

Silas Pearse.

25 August 1835.

30. Did you wait for some time after 12 o'clock to ascertain what was the result of your tender?—I waited until two o'clock.

31. Were the other parties who put in tenders that day, also in waiting?—They were.

32. After waiting some time, what steps did you take?—I saw a gentleman of the name of Dent.

33. Who is Mr. Dent?—I believe Mr. Dent is Commissioner Ross's clerk; myself, Mr. Roberts and Mr. Scott, Messrs. Sparrow & Simmons, were all present; and we asked him "why we did not know the result?" so did several of the gentlemen who tendered for granite also, whose names I do not know exactly. There was some conversation about it, and Mr. Dent said, "it was of no consequence, we might have our tenders back;" and I believe the other parties were very willing to take them back.

34. Who were?—I judged so from their manner—the parties who tendered beside me for the limestone; I said, "if they were taken back, I would protest against it." I never had mine, and I suppose the others had not theirs.

35. What o'clock was this?—About two o'clock the same day.

36. What appeared to you to induce Mr. Dent to offer to return you back your tenders?—I do not know.

37. Did you express any anger among you, at not having the result communicated to you?—I was not present at the first of the gentlemen meeting with Mr. Dent; I was there when this was mentioned; we were all round Mr. Dent in His Majesty's Dock-yard, and he was asked "why we did not know the result?" and what reply Mr. Dent made to that I do not know, only I heard him say, "we might have our tenders back."

38. Do you mean to say, before this conversation that you and others had with Mr. Dent, you were informed that some previous conversation had taken place between the other gentlemen and Mr. Dent?—Yes, before I came up to the party.

39. Who told you that?—I saw them in conversation when I came up.

40. Did you say some of the parties seemed disposed to take back their tenders?—Yes; it appeared to me that they were all agreeable to take their tenders back, had it not been for myself; I said, if it was so, I would protest.

41. Who were the parties who seemed willing to do that?—Nobody made any opposition to it but myself.

42. What do you understand induced them to be willing to take back their tenders?—I do not know.

43. They were silent, and you alone protested, and from that you form an opinion they were not unwilling to concur in taking back their tenders?—Yes.

44. To whom beside yourself did Mr. Dent make this observation?—It was not to me in particular, but to the whole party.

45. Who were present then?—Mr. Scott, Messrs. Sparrow & Simmons, Mr. Roberts, agent to Mr. Hugh Macintosh, and several people that tendered for granite from Cornwall, whose names I do not know.

46. Was any person there on the part of Mr. Johnson?—Mr. Johnson was in the yard at the time, but he was not present at this.

47. He was not one of the persons Mr. Dent addressed?—He was not.

48. After this took place, about two o'clock, did any thing more pass between you and any of the persons in Captain Ross's office?—I left the yard, soon after two, with some gentlemen from Cornwall; we went out of the yard, and took some refreshment; I returned to Commissioner Ross's office about four, and could hear nothing more to my satisfaction, nor could any one else, on the subject respecting the tenders; I left the yard, and went home.

49. Did you make any further inquiry in the course of the day respecting the result?—In my way home I met old Mr. Peter Simmons, senior, partner with Sparrow.

50. Was he one of the tenderers?—Yes; I met him in Plymouth; he asked me "whether I knew any thing more of the result of the Breakwater?" I said, "no;" said he, "Are you going to put in a second tender?" I said, "I know nothing of the subject;" he said, "I have a second tender in my pocket;" whether that second tender was delivered or not I do not know.

51. Did you understand, from what he said, that he was going to offer a second tender?—He was going towards Devonport at the time.

52. From

52. From what he said, did you calculate that it was his intention to offer a second tender?—I cannot say; he only said that to me, and whether he intended to deliver it or not I do not know.

53. Did you hear in the course of the evening from any other person, that any second tenders had been put in?—Never, and never fancied there could be such a thing.

54. When you were present with the gentleman at two o'clock, and afterwards at a later hour, did any conversation pass between you and them respecting the opportunity that was to be afforded to them to put in an amended tender?—Never.

55. You never heard of it until you saw Mr. Simmons?—Not a word passed of the sort; no thought of such a thing.

56. You mentioned that you delivered your tender at the Commissioner's office; did you see Captain Ross in the course of the morning?—I did.

57. Did you see him and have any conversation with him; or did you see him holding conversation with any body else?—I saw him standing outside the door of the house he lives in; I saw Mr. Scott come down opposite; they stopped and shook hands, and walked down towards the office for about a minute or two, not more.

58. What o'clock was this?—Very near twelve.

59. Rather before than after?—Rather before.

60. The sum that the contract would have amounted to at the price at which you tendered, would have been about 1,000 *l.*; 30,000 feet at 8 *d.* would be about 1,000 *l.*, would it not?—I judge it would be more.

61. Make the calculation?—Yes, it would be about 1,000 *l.*

62. Was there any information given to you on the morning of the 17th that it was likely that a double quantity of limestone, 60,000 instead of 30,000 cubic feet, would be wanted?—No.

63. Did any of the other gentlemen who were there to put in tenders, state to you in conversation that they had heard that a double quantity would be wanted?—No.

64. No communication of the kind was made to you, either by Captain Ross, or by any of the persons attached to Captain Ross's office?—No.

65. If you had known a double quantity was wanted, should you have been disposed to ask more, or to ask less per ton?—Less, certainly.

66. When were you first apprized that the quantity which the Admiralty intended to contract for, was 60,000 and not 30,000 cubic feet?—About three weeks back from this date.

67. When the limestone is properly dressed, according to the samples that were exhibited at the office of Mr. Stuart, how many feet then go to the ton?—I have always considered 13.

68. Did you receive information at the office of Mr. Stuart as to the manner in which the stone was to be measured?—Never.

69. Did you make it a matter of inquiry beforehand how they measured the stone?—No, I did not.

70. Do you know whether, when they receive the stone from the contractor, they take it by measurement, or take it by weight?—By measurement.

71. But your own computation was that it would amount to about 7 ¾ *d.* a foot?—Yes.

72. That is assuming there is 13 feet to the ton?—Yes; it is 7 ½ *d.* twelve-thirteenths of a farthing per foot.

73. By the ton you mean 20 cwt.?—Yes.

74. Is the limestone of your quarry of good quality?—Very good.

75. Is it compact, or what limestone does it resemble most?—There are different strata in the quarry.

76. What is yours?— Good firm limestone, as any in the port of Plymouth.

77. Is it black?—No, it is deep blue.

78. With reddish vein?—Some part is, the other is quite blue.

79. How many ounces go to the cubic foot?—I am not exactly aware of that; I will have one cubic foot of limestone from my quarries, that shall be here in two days

80. Is the cubic foot that you intend to produce worked in the way, as to surface, in which it was proposed to work the limestone for the Breakwater, or is it worked more finely?—I do not know that it is worked finer; I have sent home

Silas Pearse.

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since I have been here, to have it done; be it as it may, it can make no difference in the quality of the stone.

81. May it not make some difference as to the quantity?—No, it will be one cubic foot.

82. Was any objection made at the time to your tender, that you had put it in at so much per ton, and not at so much per cubic foot?—Not at all.

83. Have your quarries been in constant work since the time of your tender?—Yes.

84. Has there been any strike among your workmen?—Never.

85. Or any difficulty on your part to have executed the contract, supposing you had it?—Never.

86. Has any limestone from your quarry ever been supplied in former times for the use of the Breakwater?—Never.

87. Do you know the quality of the limestone in the quarries Mr. Scott works?—Well.

88. What is the quality of the limestone of your quarry as compared with the limestone in the quarries of Messrs. Scott?—Mine is as good as Mr. Scott's.

89. Is the quality about the same?—I should say, if any thing, mine is better; firmer stone; I do not speak it to depreciate the value of Mr. Scott's stone.

90. Were you ever, on any former occasion, a contractor with the Admiralty?—Never.

91. Or with the Commissioners of the Dock-yard?—Never.

92. Not for any commodity of any kind?—Never.

93. You never before tendered for limestone?—Never.

94. Were you ever a bankrupt, Mr. Pearse?—Never.

95. Did you ever compound with your creditors?—Never.

96. Under whom do you hold your quarries?—It is my own land.

97. Were you in some pecuniary difficulty about a year ago, and were you arrested for the sum of 340 *l.*?—I was.

98. Have you paid 20 *s.* in the pound on that debt?—To every man living.

99. Was the person who arrested you for 350 *l.* the only party who arrested you at that time?—Yes.

100. Have you got over your difficulties?—I have.

101. Should you have been able to execute the contract to the amount of about 1,000 *l.*?—Yes, or 10,000 *l.*

102. Did you put in, together with your tender, the name of a surety for the due performance of the contract?—I did.

103. Who was the person proposed?—Mr. Milton, of Liskeard, a person of very good landed property.

104. Living at Liskeard?—Yes.

105. Were you, Mr. Pearse, a partner with Cotton and Kames, limestone merchants, who had quarries at Hoelake, near Oreston, and who were bankrupts about a year ago?—Yes.

106. Were they bankrupts as to their separate estate?—Yes, on the property Mr. Scott has bought.

107. They were bankrupts as to their separate estate?—Yes.

108. But the firm in which you and they were partners, was not bankrupt?—No.

109. But you paid the claims on the joint estate, did you?—Me and my other partner whom I had then with them, John Pinch, who is since dead.

110. You paid 20 *s.* in the pound on the claims that there were against the joint estate, whereof you and Pinch were partners?—Yes.

111. And all the claims against the joint estate, then, have been liquidated?—Yes.

112. Were the quarries that you, together with Pinch and Cotton and Kames, worked at Hoelake, sold under the order of the bankrupt commissioners?—No, they were not sold; they belong to Sir John Lemon Rogers; and the other part that was sold of Cotton and Kames, is what Messrs. Scott bought; the others were not sold, and are not sold to this day.

113. The quarries you worked, together with Cotton and Kames, were not sold?—No.

114. The quarries Messrs. Scott now work, they purchased of Cotton and Kames' separate estate, did they?—Yes, from the assignees.

115. The quarries which Scott purchased of the separate estate of Cotton and Kames, are the quarries that Messrs. Scott now work?—Yes.

116. You

116. You had nothing to do with those quarries?—Never.

117. Is there any demand for the limestone in block, wrought in the manner that it is required for the Breakwater, independent of the demand for the Breakwater?—Not at all.

118. There is none?—No.

119. There would be no sale for it at Plymouth?—Not at all.

120. Do you know whether Messrs. Scott had prepared any limestone, similar to that wrought limestone in blocks that is required for the Breakwater, prior to the 17th of February, the day on which the tenders were required to be sent in?—Yes.

121. How do you know it?—I have seen it.

122. When did you see it?—Many a time; as many as 10 times, I suppose, prior to the contract; I cannot exactly say the date; probably 20 times I have seen it.

123. When was it you first saw it?—I saw it the 8th of January.

124. From the 8th of January up to what time did you see it?—It has been continually in work from that time, and I believe months before.

125. Was this a portion of an old stock that they had taken from their predecessors, or was it limestone that they appeared to be actually preparing at the time?—Actually preparing at the time, there was no old stock on the ground.

126. Did the quantity appear to be increasing from the 8th of January, when you think you first saw it, up to the time when the tenders were put in?—Yes, it went on from two to three, from four to five, until it came on to from twelve to fifteen masons who were dressing the stone.

127. What was the quantity, as near as you can judge?—I cannot answer that question.

128. About?—Many hundreds of tons.

129. From the close of the 17th of February, when you had this conversation with Simmons, nothing further has taken place as regards you and the Admiralty respecting the contract for limestone?—No.

130. You have had no communication with either Captain Ross, or any person attached to his office in the Navy-yard at Plymouth?—None whatever.

131. Do you reside at Plymouth?—Oreston, near Plymouth.

132. How long have you lived there?—Eighteen years.

133. Have you any business in this part of the country?—Never.

134. Have you a brother, a contractor?—No.

135. You have no brother?—I have four brothers.

136. Have you a brother who contracts for cutting canals, hills, and so forth?—No.

137. You say several hundred tons of wrought limestone were lying at Scott's; can you state the quantity within 300 or 400 tons?—I should say from 200 to 300 tons.

138. Did you measure it?—No, I did not take the liberty to measure it; I have passed them repeatedly.

139. Did you see how many men Messrs. Scott had at work in the quarry?—For the first week there were, I believe, two or three masons, as we term them, for dressing the stone.

140. What do you give a foot for dressing the stone?—I do not require any masons to dress stones of that kind in my quarries; there is no demand for any thing of the kind in our neighbourhood, without it is for the Breakwater.

141. Then it would have been a new business to you?—If I had dressed stones of that kind, they would have laid on hand as long as I had lived; I should never have sold them.

142. What is the price for dressing the limestone rock?—It depends entirely for what purpose, and what is the form of the stone.

143. What sized stone should you have had to deliver?—From two tons to five, or six or ten tons.

144. Was there any size specified in the advertisement?—Yes, none was to be less than two tons, five tons, and upwards.

145. Is your quarry at work now?—Yes.

146. Is the limestone that you ship, used principally for building or manure?—The greater part for manure.

147. You have a considerable sale there?—Yes.

148. What number of men do you employ?—I employ 24 men now.

149. What is your business?—Only limestone-merchant and farmer.

 150. How

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150. How much of the land belonging to yourself is lime rock?—Twelve acres out of the 32 is lime rock.

151. That is your own?—Yes.

152. Do you mean to say that there are 12 acres that are quarry?—Not 12 acres in work.

153. Part of the 12 acres is covered with herbage?—No, it is all pasture land as yet.

154. You are not in trade at Plymouth?—No.

155. You are not a shipowner?—I have three little vessels, and I have a part in two others, with my brother. I was a shipowner once, and was unfortunate in it, rather.

156. Explain the circumstance?—I owned the half of a ship that was in the New South Wales and Van Diemen's Land trade; which is since sold.

157. You have since sold that?—Yes.

158. Got quit of that part of your business?—Yes.

159. You lost money by it?—I did, a great deal.

160. How much money do you think you lost by it?—Nearly 3,000*l.*

161. How long since was this speculation?—The ship was sold about 12 months since.

162. Have you granite rock as well as limestone rock?—There is no granite rock in the port of Plymouth; it all comes from Cornwall that comes there.

163. Your brother was partner in that ship?—Yes, and another person of the name of Riparth.

164. Is that ship account quite closed?—Yes.

165. Do you understand what is meant by the expression, that the account is closed?—Yes.

166. You said you had no communication from the office, after you had delivered your tender?—None.

167. Is it ever usual, except on the acceptation of a tender?—No, I do not know that it is. I went to the office the second time about four o'clock, and could get no communication, and consequently I left the yard.

168. Is it usual, in the course of a few hours, to accept a tender; must not the tender go to the Board of Admiralty?—It was considered, in consequence of the advertisement expressing a principal or agent was to be in attendance, that we were to know the result at that time.

169. Do you conceive, the Commissioner, then, could accept the tender, without the sanction of the Admiralty?—We, as tenderers, all considered so; and we knew no other.

170. Was there any case where the practice had been otherwise?—There never was a tender for the Breakwater before at the Commissioner's in Plymouth Dock-yard.

171. At former tenders, the tenders had been sent to the Admiralty in London, and not to the Commissioner's office at Plymouth?—Never.

172. When you say *we* supposed so, do you mean all those persons who you state were in the Commissioner's office, and were anxious to know the result?—When I say *we*, I mean all the parties who tendered.

173. All with whom you had conversation?—Yes.

174. What part of the advertisement is it that led you to believe an answer would be given from the Commissioner's office?—Because it expressed in the advertisement the principal or his agent were to be in attendance.

175. Did any rise of the wages of the quarrymen take place about or after the day when the tenders were to be delivered?—No.

176. Have you ever had occasion to pay any additional wages to the men employed in your quarry since the 17th of February?—No; but, on the contrary, if I pleased, I might have paid them less, labourers have been so plenty, but I have not.

177. Did you hear of any rise in the price of wages of persons employed in dressing the stone afterwards?—No.

178. Should you, if any general rise in wages of workmen employed in dressing the stones had taken place subsequent to the 17th of February, have heard of it, do you think?—Decidedly so; I must have heard of it.

179. Is Mr. Milton, of Liskeard, the person who was a schoolmaster?—He was.

180. He has retired from that now?—He has.

181. Read over the advertisement of the tender to yourself carefully; have you read it?—I have.

182. Why

182. Why did you give in your tender at a specification per ton, and not per cubic foot?—I judged that the form of tender at the Breakwater works, or at the office, said at per ton.

183. You judged that the form of tender prescribed it at per ton?—Yes, at per ton, I think, at Mr. Stuart's office, and at the works at Oreston; otherwise I should have tendered at per foot.

184. That is to say, after you had read the advertisement in the paper, you went to Mr. Stuart's office, and received the other statement?—Yes.

185. And, at Mr. Stuart's office, you say, you were informed that the specification should be made per ton?—I saw it myself; I cannot swear it was so; I am almost certain it was so said.

186. Upon consideration, you deliberately state, that you were informed, at Mr. Stuart's office, or by Mr. Stuart, the tenders were to be sent in at per ton?—That is my idea on the subject.

187. Are you aware that all the other tenders were sent in with a specification per cubic foot?—I was not aware of it.

188. But you did go to Mr. Stuart's office, after having read that advertisement, to receive your further instructions?—I did; they were laid on the table in the office, and I looked them over.

189. Are you understood to say that, from what you saw or heard at Mr. Stuart's office, you took up the idea that the tenders were to be made per ton?—Yes.

190. Whether right or wrong you do not pretend to say?—That is my idea on the subject, and that I thought.

191. Were you informed so by any body there?—I was not.

192. Did you see a notice of that kind stuck up there?—No; looking over the form of tender which I saw on the table in Mr. Stuart's office, I read it in that way, and I believe I have made no mistake, that it was at per ton; and I never heard any one say it was to be at per ton or per foot.

193. You went to Mr. Stuart's office for the purpose of learning the other particulars?—Yes.

194. Having reached that office, did you make no inquiry?—There was no one there to inquire of but Mr. Clarenbole, Mr. Stuart's clerk, until just as I was coming away; Mr. Stuart then came into the office, and I did not stop in the office one minute.

195. Did you ask for any information from him on the subject?—No, not one word.

196. You say, you read it in that way; what do you mean? what did you read?—My idea was, that, in the form of tender lying on the table in Mr. Stuart's office, it was at per ton instead of per cubic foot.

197. What you saw at Mr. Stuart's office was not this advertisement, but something else?—No, it was not this, but the form the tender was to be made in.

198. What you read in Mr. Stuart's office was an official document, which was to point out to you or any one who made the tender, the manner in which the tender was to be made?—Yes, I so understood it.

199. Were you understood to say just now, that whether you made it by ton or by foot, the form of the tender was immaterial to you?—I considered my tender was the same as if it was 7 ¾*d.* per foot, or thereabouts; at 13 cubic feet to the ton.

200. Would you have had any objection to make the tender in cubic feet, if you had been told that was the only way of doing it?—Certainly not.

201. Is your stone what is called Purbeck stone?—No, it is limestone.

202. Is it as good as Purbeck stone?—I never heard the term.

203. You say you allow 13 feet to the ton?—Yes.

204. How many ounces go to the cubic foot; at 14 feet to the ton are there not 2,560 ounces to the foot; and at 13 feet to the ton, 2,757 ounces?—I cannot answer the question how many ounces, I am not a sufficient calculator for that.

205. You have stated, that your calculation is about 13 cubic feet to the ton?—Yes.

206. Do you mean to state that such is the customary calculation of the trade?—I have always understood that it was 13 feet to the ton.

207. Have you not understood there was a difference; that other persons calculated differently?—I do not know.

208. Have you never heard that 12 feet was the calculation?—I have heard so.

209. Have you ever heard that 14 was?—Never.

210. You have heard that 12 feet was?—Yes.

 211. Would

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211. Would there not be considerable waste in reducing these tons of stone to cubic feet?—There can be no waste; the waste would be in the dressing from the rough state, before they are measured; those stones are not measured before they are dressed, but after.

212. According to the terms of the advertisement, it is to be so much for wrought limestone?—Yes, the stones must have been measured when they came to the Breakwater.

213. What waste there was, would fall on you?—Yes.

214. In 1828 had you occasion to forward to the Admiralty a certificate of your being a respectable man, and is that a copy of it?—Yes, it is.

[*It was handed in, and read.*]

COPY of a CERTIFICATE sent by Mr. *Silas Pearse* to the Admiralty, 12 June 1828.

THESE are to certify all whom it may concern, That we the undersigned do know Mr. *Silas Pearse*, and believe him to be a civil, honest and industrious tradesman, as a butcher and farmer in the neighbourhood of Plymouth, and therefore deserving of encouragement.

Dated 11 June 1828.

S. Pym, Capt. R. N.
T. Searle, Capt. R. N.
Henry Higman, Capt. R. N.
John Thicknesse, Commr R. N.
Michael Lockyer, Capt. R. N.
John Smith.
James Elliot.
Edmund Lockyer, magistrate.
William Lockyer.
Peter Symons.
Henry M'Keivers.
John Luscombe.
Thomas Page.

The following passages have also been discovered in official documents at the Admiralty, relating to Mr. *Pearse*'s character.

EXTRACT from a MEMORANDUM of Lord *Morley*'s, dated 4th February 1828.

"The lessees (of certain quarries, one of them being Silas Pearse) being both poor men with families, and having sunk the greatest part of their properties in the quarries."

EXTRACT of a LETTER from Mr. *Whidbey*, the late Superintendent of the Breakwater, to the Secretary of the Admiralty, dated 12th February 1828.

"I am at a loss to conceive why Earl *Morley* should describe in his Memorandum the lessees as being both poor men with families, and as having sunk the greatest part of their properties in the quarries under the conviction of their being able to work them consistently with law; Mr. Pearse being a wholesale butcher and farmer, and considered to be a man of some property."

EXTRACT of a LETTER from Lord *Morley*, dated 16th February 1828.

"I find that Pearse is a tradesman (butcher) at Oreston, and that in each case they will severely feel the loss."

215. On what occasion was it forwarded?—As near as I recollect it was about building a wharf.

216. The Admiralty complained you had made it project rather too much?—Yes.

217. Did you reduce it according to their wish?—I did not.

218. Since the period alluded to, you have been in considerable difficulty?—I have.

219. But you now state you have paid every body, and have got over all your difficulties?—I hope I have; there is no man can say to me that I ever paid him for any debt less than 20*s.* in the pound, and I am able to do it.

220. Do you happen to know a Mr. Saunders, of Catdown, a sail-maker?—Yes.

221. Have you had concerns with him?—Yes, but not me only; it is a part concern between me and my brother.

222. What is the name of that brother?—John Pearse.

223. Have you another brother?—I have four brothers.

224. What are their names?—Joseph, Robert, John and Thomas.

225. Have you any outstanding bill payable to Mr. Saunders?—No, I have not, but my brother has.

226. What is that brother's name?—John.

227. Your

227. Your brother's name is not Silas, of course?—It is not.

228. Is there a bill of yours outstanding drawn by Mr. Saunders, and accepted by Mr. Silas Pearse?—It is the same bill accepted by me. I am not to pay it; my brother has to pay it.

229. Is there a bill of yours for 20*l.* 11*s.* drawn at forty days after date, by Mr. Saunders, and accepted by you, Mr. Silas Pearse?—There is.

230. And not by your brother?—Not by my brother, but he has to pay that.

231. That is still outstanding?—Yes.

232. That bill was returned dishonoured, was it not?—I cannot say exactly.

233. You knew it was not paid?—It was my brother who was to pay it.

234. Do you know Mr. Barnes, of Langdon?—Yes.

235. Did you accept a bill drawn by Mr. Barnes, of Langdon, for 129*l.* 13*s.* 6*d.*?—It is paid.

236. How long since?—I should think, within the last week.

237. But until within the last week, that bill had been outstanding for a considerable time?—Not a considerable time I think.

238. It was dishonoured, and remained for some time in the Naval Bank dishonoured?—I think it remained there for one month.

239. That was your bill?—It was a bill of mine.

240. Do you know Messrs. Allen & Sons, of Plymouth?—Yes, I do.

241. Have they a bill of yours in their possession, for 56*l.*?—They have not.

242. Had they very recently?—No, I have not dealt with them these twelve months and more.

243. Did they draw on you, or did you draw on some other person a bill for 56*l.*, within 12 or 15 months, which was not paid at the time?—It was paid within a week of the time they applied to me, to the best of my knowledge.

244. Will you undertake to say as to that bill for 56*l.*, that you did not pay it by instalments?—No, I do not know that there was any thing of the sort; I cannot say it was so; I recollect the time very well, it was just at the height of my difficulties.

245. About how long ago is it?—About a year.

246. You have ceased to deal with Messrs. Allens, have you not?—I have.

247. Have the goodness to inform the Committee, whether that was in consequence of Messrs. Allens' declining to serve you, unless you paid them ready money?—Not in the least.

248. That you distinctly state?—I distinctly say so.

249. Did they refuse to give you any further credit?—I never asked them the question in my life.

250. Did you send them any order?—I do not think I sent them any order for powder, after this circumstance turned up about the bill; a person in the limestone trade lent me a portion of powder, Mr. Henry Hart.

251. Did Messrs. Allens refuse to let you have more powder, unless with ready money?—To the best of my knowledge, never.

252. If any body states that, they will state what is not true?—To the best of my knowledge, I say again that is not so.

253. Do you happen to know Mr. Yolland, Lord Morley's agent?—I do.

254. Have you any accounts with Mr. Yolland?—None; I have had.

255. Did Mr. Yolland arrest you recently?—No, about the same time.

256. All this was about a twelvemonth ago?—Yes, about the same time.

257. Now, Mr. Pearse, you remember perfectly the period of sending in this tender?—Yes.

258. At the time that you sent in that tender, had you an execution in the house?—No.

259. You had not an execution in your house for a bill of about 100*l.*, which was returned dishonoured?—No.

260. You distinctly state, that you had no execution in your house, on or about the time of your sending in that tender?—No, to the best of my knowledge I certainly had not.

261. Do you know Mr. Sweet, a sheriff's officer?—Yes.

262. When did you see Mr. Sweet last?—Last Thursday, I think it was.

263. Do you happen to remember where?—At his own house—no, at Mrs. Arlis's, his sister.

264. Can you recollect the conversation you had with Mr. Sweet in Mrs. Arlis's shop?—I can.

 265. You

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265. You are aware, in the period of your difficulties, Mr. Sweet has often taken you into custody?—No, not often; he has arrested me on the business respecting Mr. Denbar, as to the 340*l.*

266. Did Mr. Sweet, the sheriff's officer, often arrest you during the period of your difficulties, about a year ago?—I think two or three times; Mr. Yolland was one, and Denbar another; that was not all my own concern, the greater part was for the ship which I had the misfortune with; my partners, my late brother and Mr. Riparth, they were not known in the concern; I was the principal, being the ship's husband.

267. In point of fact, has Mr. Sweet arrested you six or eight times?—No, nor yet half of it.

268. Three or four times?—To the best of my knowledge, three times.

269. Did you ask Mr. Sweet to say, "if he was called here, that he knew nothing about you?"—No; I saw Mr. Sweet on Thursday or Friday last, and I had some conversation with him respecting a person that I had been forced unfortunately to arrest; and I wished for it to be kept a secret; a person by the name of Ryder.

270. Then you did not ask Mr. Sweet in Mrs. Arlis's shop to say, if he was sent for here, to say he knew nothing about you?—No, I had no idea of saying any thing of the sort; I had no idea of Mr. Sweet being sent for here on my account; the conversation was with Mr. Sweet, as respected Ryder.

271. You had conversation with respect to some other man whom you had arrested, and you wished Sweet to say nothing about that?—Yes.

272. Do you know Mr. Edmonds?—Yes.

273. Who is Mr. Edmonds?—An attorney.

274. Was Mr. Edmonds concerned in drawing up this petition?—I do not know, I rather think he was, he and Mr. Coryndon.

275. Have you not stated that Mr. Edmonds was concerned in drawing up the petition?—I saw Mr. Edmonds on the subject, and Mr. Coryndon.

276. Now, consider well before you answer this question; how do you happen not to know precisely who drew up your petition?—Because both parties have had my information.

277. What do you mean by both parties?—Mr. Coryndon and Mr. Edmonds.

278. Was this petition drawn up by your desire?—Yes.

279. And under your direction?—Quite so.

280. Did you state to Mr. Sweet, that Mr. Edmonds desired you to ask him to say that he knew nothing about it?—Not at all; Mr. Edmonds was my attorney on the subject of what I mentioned before—that is Ryder's case.

281. In Mrs. Arlis's shop, when you spoke to Mr. Sweet with reference to these concerns, did you not say that Mr. Edmonds had desired you to speak to him with reference to those arrests?—Not on the subject of my being arrested.

282. Upon what subject had he desired you to speak to Sweet?—It was respecting Ryder I was talking then of.

283. You considered yourself aggrieved in not having your tender accepted?—I did.

284. And that was in February?—Yes.

285. How happens it that you allowed five months to pass over, without making any complaint?—Because I did not know that my tender was the lowest.

286. When did you know that?—I cannot say to a day or two.

287. About what time did you know that?—I should think about three weeks since.

288. Not more?—Not more.

Thomas Bewes, Esq. (a Member of the House); Examined.

Thomas Bewes, Esq. M. P.

289. HAVE the goodness to inform the Committee whether you consider Mr. Milton, of Liskeard, in Cornwall, a good surety for the execution of a contract to the amount of 1,000*l.*?—I have a very slight knowledge of this Mr. Milton, a schoolmaster; I know him chiefly by general reputation; but I know that he had an estate very near adjoining a property of my own, and I should think he was then a very good security for the amount of 1,000*l.*; what he may be now, I do not know.

290. If you had a contract to that amount to have executed for you, should you be satisfied with taking Mr. Milton as the surety for the execution of it?—I have not heard any thing of him for the few last years; I should conceive I was not in the least danger.

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291. What is Mr. Milton?—He was a schoolmaster at Liskeard; I trust more to the understanding that he had property; he had an estate in Cornwall; he had a house and property of his own, where he lived and kept a school. He was always considered to be a man very thriving, and a man accumulating property fast; that was the general understanding.

Silas Pearse's Examination continued.

Silas Pearse.

292. DO you know whether Mr. Milton has now an estate in the neighbourhood of Liskeard?—I do; he has an estate by the name of Goldenbank, and some little leasehold property which I know nothing about; and the same estate that Mr. Bewes had some knowledge of, in the parish of Dowlan, in Cornwall.

293. Do you know whether the estate has any mortgage on it?—I do not know of any such thing, I do not know whether there is or is not; I should fancy there is not, from the way he goes on.

294. Did you ever state in the presence of any persons "that you knew nothing of the petition, until some letters and papers were put into your hands by the parties who prepared them; and that you should not have done so of your own accord?"—I have said that I should have known nothing about it, if it had not been for some friend of mine giving me information respecting the contract, whether mine was the highest or the lowest tender.

295. That is not the question; the question is with reference to the petition to the House of Commons; did you state in the presence of any person "that you knew nothing of the petition, until some letters and papers were put into your hands by the parties who prepared it?"—No, I never mentioned that, because I went to Mr. Edmonds and Mr. Coryndon myself, and desired them to petition for me.

296. And you did also state that you should not have done so of your own accord?—No, I cannot say that.

297. And you did not state it?—No.

298. And if any body comes and says that you did say so, they say that which is not true?—I should never have known any thing respecting the price of the stones for the Breakwater, had it not been for some friends of mine; consequently I never could have petitioned without knowing that; that is what I mean to say, that I did not know more than three weeks since.

299. But the petition was your own act, and at your own instigation, and at that of no other person?—Certainly so.

300. You mean to say, that but for some information that was given you by some friend of yours, you would not have petitioned?—I could not have petitioned, if I did not know it.

301. You were not in possession of the information?—I was not.

302. Who were those friends who gave you this information?—Mr. Coryndon.

303. Did Mr. Coryndon advise you to petition?—Not at all.

304. It was your own act entirely?—Entirely.

305. Mr. Coryndon and Mr. Edmonds prepared the petition?—They did.

306. Had you any letter from Mr. Collier, the Member for Plymouth, on this business?—Never.

307. And you never said you had a letter from him?—There was a letter from Mr. Collier.

308. Was there a letter from Mr. Collier to you on this business?—Not direct to me.

309. To whom?—To Mr. Edmonds.

310. Before you petitioned, or after?—I think before.

311. Was it in consequence of that letter that you petitioned?—In consequence of that letter, and some other letters that were received by Mr. Collier; otherwise I should not have known who the highest or who the lowest was in price, for the tender of the Breakwater.

312. Then it was in consequence of a letter from Mr. Collier to Mr. Edmonds that you ordered this petition to be prepared?—Yes, these letters to Mr. Collier.

313. Are you indebted to Mr. Collier?—Not one farthing, to the best of my knowledge.

314. At the period of the receipt of that letter were you indebted to Mr. Collier?—To the best of my knowledge, I do not owe Mr. Collier one farthing.

315. When you received that letter, were you indebted to Mr. Collier?—No; there is a balance of an account between me and Mr. Collier unsettled.

316. In which you are the debtor, I presume?—I do not know really that I am.

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317. Do you keep your accounts so loosely, that you do not know whether you are debtor or creditor?—I have been having some timber of Mr. Collier, and Mr. Collier has had some things from me; to the best of my knowledge, I do not know that I owe Mr. Collier any thing.

318. There is a running account between you?—Yes.

319. And is there a good deal of intercourse between you and Mr. Collier?—There is not.

320. Not when you have a running account?—No, not a great deal of intercourse; Mr. Collier is a gentleman I never spoke to three times in my life, in my opinion.

321. You have a running account, but you do not know whether you are creditor or debtor?—There is an account with Mr. Collier.

322. And it was because you did not know you were debtor or creditor, that you have just now said you were not in his debt?—I recollect Mr. Collier's account against me is 36 *l.*

323. What is your account against him?—Upon my word I cannot exactly say; my account probably is about the same; but I will venture to say, it is a good deal more than 20 *l.*

324. Are there any bills of yours at this moment lying at the Commercial Bank at Plymouth?—No, there is nothing more than what they have security for.

325. What species of security have they?—They have a security from two friends of mine.

326. Who are those friends?—I was wrong in what I stated as to that; the Commercial Bank has a mortgage on some leasehold property that I have; I have notice to pay them off within two months of this time.

327. You have not paid them?—No I have not.

328. Will you state distinctly, Mr. Pearse, that there are no outstanding bills of yours lying in any of the banks in Plymouth dishonoured?—No, there was one at the Naval Bank, and that is paid, as I said before, within the last week.

329. What bill is that?—Barnes's bill, 128 *l.* or 129 *l.*

330. There is Mr. Saunders's bill?—That is not paid off, I believe; it may have been paid within this last week; it has nothing to do with me.

331. Have you a dispute with Mr. Saunders, as to whether you ought to pay that or no?—No, a dispute with my brother.

332. Do you consider that you ought to pay it?—I consider that I ought not to pay it.

333. Have you represented that to Mr. Saunders?—No, I have not told him who was to pay it.

334. Is your reason for not paying it, that you are not able to pay, or that you dispute the propriety of being obliged to pay it?—It is due; but my brother ought to pay it.

335. This tender was made in February of this year; in point of fact, were you in February in custody of a sheriff's officer?—No, not that I recollect.

336. That is a circumstance that must make an impression on you?—Not at all; it makes no impression further than what I have stated; that is, I was arrested altogether three times, but as to the day or month I cannot state.

337. Whether in February, the month in which you made your tender, you were in custody of the sheriff's officer, you cannot tell?—To the best of my knowledge, I was not by any means.

338. That you state deliberately?—To the best of my knowledge.

339. The Committee wish you to remember?—I recollect that Sweet, the sheriff's officer, has troubled me three times.

340. Were you in custody of the sheriff's officer in March?—I do not know whether I was.

341. Remember that?—I cannot remember it; I cannot remember the times.

342. Were you in custody in the month of April?—If I were to gain the whole world by answering that question, to say the time I could not.

343. Were you in custody in the month of May?—I do not remember.

344. When were you in custody?—I do not know the day of the month that I was in custody. I was in custody three times, and not all on my own account; the fact was, this ship that I lost the money by, belonged to me and my late brother, and Mr. Charles Riparth; I happened to own more than half of her, and I became the ship's husband; the other parties were not known; I was arrested for the debts, and it was not my own private debts I have been arrested for.

345. Will

345. Will you say you were not in custody in the month of February?—I will not say so, because I do not recollect.

346. Will you say you were not in March, April or May?—No, I could not say; if I were to save the world, I could not say the time.

347. But when you were arrested, for how long a time did you remain in custody?—I never was taken in custody myself; I directly put in bail, and had the money paid, or paid it myself at the time. I never was kept in custody on all those cases.

348. It was merely an arrest?—I never was in custody in my life on my honour: I could have got friends to ten times the amount to give bail for me.

349. To go back to that bill of Mr. Barnes for 129*l.* 13*s.* 6*d.*, you say it was paid last week?—Yes.

350. Can you recollect how long that bill remained in the Naval Bank?—I cannot; probably it might be a month.

351. You think not more?—I had no idea I was going to be asked that question; consequently I have brought nothing with me, so that I cannot give the particulars.

352. Was it about three months, or two months?—It was not three months, nor any thing like it.

353. That bill was paid last week, was it?—Yes.

354. By you?—Paid by my property.

355. Who took up that bill?—Barnes paid the money, but the money was mine.

356. Who took up that bill at the Naval Bank?—Barnes paid the money.

357. Who took up the bill?—The money was mine; but I did not go to the bank with the cash myself, but Barnes went with it. I am satisfied I gave Barnes the money, and I suppose the bill was taken up; I know nothing to the contrary.

358. You say you might have been arrested either February, March or May; but will you say you did not continue in the custody of the sheriff's officer any length of time?—Never longer than until I could procure bail, which was near three hours, or two hours.

359. Now about the execution in your house for this bill of 100*l.*, are you not aware there was an execution in your house in February last?—I am not, really.

360. Will you undertake to say there was not an execution in the house?—I do not know there was, I have been arrested so many times, and there was a sheriff's officer in my house, and he might have been there a day or two. I do not know which of the three or four cases it was.

361. At the time you were making this tender, the question is, whether there was an execution in your house?—On oath, I am able to say, to the best of my knowledge, it was not so.

362. Do you know Mr. Beere, of Devonport?—I do; when I say I know him, I do not know him personally, I know his name very well; he is an attorney, I believe.

363. You never had any pecuniary transaction with him?—No, I never saw the scratch of a pen from the man in my life; that is the man who arrested me through Yolland, Lord Morley's steward.

364. Do you know Mr. James Cuddiford?—I do.

365. Have you had any transaction with Mr. Cuddiford?—None.

366. You owe him nothing?—Not a shilling; I have had transactions with him, but I have not now.

367. Did he arrest you recently?—He did arrest me, but not recently.

368. How long ago is it since you settled that debt with Mr. Cuddiford?—I should think about last April twelvemonth.

369. At the time your tender was rejected, did you make no effort to ascertain the amount of the successful tender?—No, I did not know to what source to apply.

370. You did not think it worth while to make the inquiry?—I should have liked to have known, but I did not know where to apply.

371. Did you make the inquiry?—I applied to the people in the neighbourhood, and from one friend to another; but as to going to any official quarter, I did not.

372. Was it never stated to you what was the price in the tenders?—No, I have had it stated to me that it was 10*s.* a ton, 12*s.* a ton and 8*s.* a ton; and those people who so stated it to me, did not know any better than myself; not in any official way.

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373. When those statements were made to you, you never thought it worth your while to make an attempt to verify them?—I did not exactly know how to go to work to manage it; as it appeared that Messrs. Scotts had the contract, I thought there was an end to it, and it was no use, as I fancied, to apply; I had no idea that I could have applied any where to have known.

374. Was not the amount of the tender, that Mr. Scott had given in, a matter of great notoriety?—It was not known in our neighbourhood, that ever I heard of.

375. In short, you never made any attempt to ascertain the amount?—No, I did not know where to apply to ascertain; if I had gone to His Majesty's Dock-yard at Plymouth, I am satisfied I could not have known there; and as to applying to higher powers, I had no interest in applying any where, and did not know how to apply.

376. From your experience, should you not say, as a fact, that the price in the tenders is always known?—No, they are not known in our neighbourhood.

377. Do you live in Devonport?—No.

378. It was in consequence of letters you received from London, that you thought it worth your while to ascertain the amount of the tender?—Yes.

379. Three weeks ago?—Yes; not exceeding three weeks.

380. Those letters gave you the information which you required, and told you where to apply for the information?—They gave me the information that Messrs. Scotts' tender was so and so, mine was so and so, and the others was so and so; and mine happened to be the lowest; and that made me persevere to have a petition got up to the House of Commons.

381. Now as to what happened in Mrs. Arlis's shop, did Mr. Sweet ask you, who had paid your expenses?—What expenses?

382. In that conversation with Mr. Sweet, did he ask you who paid the expenses of the petition?—He never opened his mouth to me respecting the petition.

383. He did not?—He did not.

384. And if he did not ask you the question, "it is not true that you answered, you did not know, but you would go and inquire of Mr. Edmonds about it?"—Not true.

385. That is false?—I am ready to meet any person on that ground.

386. You say that you saw Mr. Scott walking with Captain Ross; were they walking arm in arm?—They were not.

387. They were walking apart from the others?—They were apart from the others.

388. At so great a distance, that what they said could not be heard?—Yes, I do not know what their conversation was; I have stated here exactly, as I recollect, how I saw Commissioner Ross, (as we call him in our neighbourhood,) and Mr. Scott. I saw Mr. Scott come past the Commissioner's house; the Commissioner was standing outside the door; Mr. Scott shook hands with the Commissioner, and then they walked together for about a minute or two; I should think not longer; how much more they might have gone together, I know nothing about; I never saw them together afterwards, in particular.

389. Did you not say you heard from Mr. Simons that he had a second tender in his pocket?—I did.

390. Did he assign a reason for having it?—Not at all.

391. Are these quarries your own?—They are.

392. Did they come into your possession by purchase?—They did.

393. You purchased them of the Duke of Bedford?—No, I purchased them of a Mr. Eliot, since dead.

394. You do not hold these quarries by lease, or any other tenure, under the Duke of Bedford?—No.

395. Have you a right of way to them?—Yes.

396. Do you pay any rent for the ground to approach them?—Not at all; the public highway comes close to my own premises.

397. Did you never sign any person's name to any bill of yours?—Never but once, which I was authorized to do, when the party was a partner of mine. Cotton and Kames were the party; it was a concern between us; Messrs. Cotton and Kames were partners with me; they made use of my name, and I of theirs, as partners; and never else.

398. Was it ever made a charge against you, that you put other persons' names to your bills?—I mean to say, I have been told of it—but not by them particularly—and within this last week.

399. You

399. You have been charged with it?—Yes, I was charged.

400. You never put other persons' names?—Yes, I did, in that transaction.

401. Were you authorized to do so?—Quite so.

402. Do you hold these quarries in fee?—A fee farm; and I pay 3*l.* 5*s.* a year to the Duke of Bedford; it is for ever.

403. Did you put into circulation again a bill of that partnership that had been paid?—Never.

404. Were you ever accused of that?—Never, without it was one evening. There was a party talking one with the other; the person did accuse me with it then, certainly; but I mean to say the man who accused me with it, knew all about it, and he will say so, if he is brought here.

405. Who was the party who accused you?—Cotton was the man.

406. Who had been your partner?—Yes.

407. When was this?—It must be five or six months ago, I should think.

408. Before the period that you made that tender?—It might be two or three months before it, or two or three months after; I never made any memorandum of it.

409. Was it after their bankruptcy?—Yes.

410. Is the 3*l.* 16*s.* a year the sum total you pay to the Duke of Bedford?—Independent of what property I rent of the Duke.

411. That is for the quarry?—Yes.

412. Is not the Duke of Bedford entitled to some share in the produce of those quarries?—Yes.

413. And how much?—One-seventeenth part.

414. Are you sure it is not a fifteenth?—I am sure of it.

415. Has the Duke of Bedford regularly received that portion?—Yes, he received the remaining part of it last Friday. The Duke of Bedford's agent and me have never had a regular settlement on that score, because of the building the wharfs and all those things; and I mean to say I do not owe the Duke of Bedford the value of one of those pens. The Duke of Bedford is not to receive one-seventeenth of the profit.

416. The Duke is not entitled to one-seventeenth of that part of the produce which is used on the premises?—No, only what is sold.

417. Was there any dispute between you about it?—Never.

418. Has there been any difference between you during the last three years?—Never.

419. In short, the Duke of Bedford has not an outstanding account against you?—Not at all.

420. And in Mr. Collier's case, you do not know whether he owed you, or you owed him?—I will venture to say there is not 6*l.* between us.

421. You hold no more of the Duke than that?—I rent some from the Duke of Bedford.

422. What do you rent?—About 32 acres from the Duke of Bedford.

423. Is it good land?—Some very good indeed.

424. Is there a heavy mortgage on these quarries?—No, there is not a heavy mortgage.

425. Is there any mortgage at all?—I have borrowed some money on it.

426. Is it a mortgage pretty nearly equal to the value of the quarries?—Certainly not.

427. Is not the amount of the mortgage 7,000*l.*?—Yes.

428. At what do you estimate the value of the quarries?—Since I bought them, before any thing was put to work on, they were valued at 9,000*l.*; that was before the wharfs were built; since then, I have laid out 3,000*l.* on them, before I earned a shilling.

429. Do you believe they would be valued now at 9,000*l.*?—I believe them to be worth 12,000*l.* at the present moment; and I am prepared to pay off the mortgage, every shilling of it, within two months of this time.

430. This amount of 7,000*l.* was raised in two sums of 5,000*l.* and 2,000*l.*, was it not?—No, there is only 5,000*l.* on mortgage, and not 7,000*l.* There was 5,000*l.* of Woolcombe and Jago, attorneys, and that is paid.

431. For what sum of money, then, are your quarries and the estate mortgaged?—In 5,000*l.*

432. Is that the whole sum?—Yes.

433. Was that 5,000*l.* from Woolcombe and Jago?—At first, but that is paid.

434. Who has the mortgage now?—A gentleman in the neighbourhood of Plymouth.

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435. What is the name of the attorney of the gentleman who holds that mortgage now?—He is an attorney himself.

436. What is the gentleman's name?—Mr. John Baily.

437. And you mean to state, that the mortgage of 5,000*l.* which Mr. John Baily holds now, is the only mortgage on that property?—Yes; I have an account with a bank in Plymouth, the joint stock bank; and I mean to say, they have security sufficient to cover every thing, and hundreds and thousands more than I owe them.

438. Have not the Plymouth Joint Stock Company a demand to the amount of 2,000*l.* on those quarries?—I do not know that they have, and I doubt if they have.

439. Have they any demand on you?—They have a demand on some other property of mine, which they have got; some leasehold property.

440. Have you ever heard from that bank a complaint of the irregularity of your payments of the interest?—I mean to say, I have had a complaint in this way, that they have given me notice to pay the money; and I will be prepared, within two months of this time, to pay them every shilling that I owe them.

441. But the matter has not been brought to a conclusion?—No; because the notice I have had, has not been given more than a month, I should judge.

442. What interest is due to the bank on that advance?—Five per cent.

443. How long is it since you have paid any interest on that advance?—I have paid money into the bank frequently; I cannot tell without I have my book.

444. Do you pay the interest regularly upon it?—No; I am in the habit of doing business with them, and I have paid them money from time to time.

445. Do they charge interest every half year?—Yes.

446. Do you keep an account with the bank?—Yes, I have kept an account.

447. And have they complained of the irregularity of your payment?—They have complained, that I have not done as much business with them, as they wished.

448. Have they complained of your being irregular in your payment on those advances?—No, I do not know that they have.

449. You mean to state deliberately that they have not?—I mean to state, I do not recollect their complaining about that; they wished me to settle the account with them, and gave me notice to do so; and I am prepared, within two months, to do it.

450. Did they assign any reason why they wished you to settle the account?—They did not.

451. You are sure of it?—To the best of my knowledge, they did not.

452. Then you say, shortly, that you are not aware that they have complained of the irregularity of your payments?—They have made some complaints of that kind; when I come to recollect, I know they have.

453. You have given them a mortgage on the leasehold land?—Yes.

454. Have they talked of foreclosing?—Yes, if I did not pay them; I have made arrangements to pay them, and they shall be paid within two months is over.

455. Has the Duke of Bedford the power of putting an end to your lease of the quarries?—Certainly not; I have a covenant between his Grace the Duke of Bedford and me.

456. What is the nature of the covenant?—For working the quarries.

457. What is the nature of it?—For 21 years; a covenant between me and the Duke of Bedford for 21 years.

458. And then there might be a new agreement?—Yes; and then there might be a new agreement.

459. Are there any conditions in that covenant, on the non-observance of which that agreement would be forfeited?—Not that I know of.

460. No difficulty has taken place between you and the Duke of Bedford's agent?—No difficulty whatever; and I have had a good deal to do with the Duke of Bedford's agent from time to time; and I will venture to say, the Duke of Bedford's agent has always found me, and so he would state, an honest man.

461. Are there any accounts between you and Mr. Milton?—Not to the amount of a farthing.

462. No running account?—No, and never was.

Mr. *Edward Scott*, called in; and Examined.

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463. ARE you able to speak to the transactions of your firm relating to the contract for limestone at Plymouth in February?—Yes.

464. Are you able to speak to all the transactions?—Perfectly.

465. Was

465. Was it you or your brother that had the principal charge of this matter?—Myself.

466. Are you an alderman of Plymouth?—Yes.

467. Did you tender for limestone for the supply of the Breakwater, on the 17th of February?—I did.

468. For what quantity, and at what price did you tender?—For 30,000 cubic feet, at 8¾*d.*

469. At what hour did you deliver in your tender?—Precisely at twelve o'clock.

470. To whom did you deliver the tender?—I put it into a box.

471. Where was that box?—At the Commissioner's waiting-room.

472. Were you directed to put it in there?—I inquired of the porter, and he showed me the box; I asked him where I was to put the tender, and he showed me the box.

473. Did you wait, in order to know the result of the tenders?—A short time only.

474. How long did you wait?—I suppose about half an hour; I do not think more than that.

475. Did you return again to ascertain what was the result?—No.

476. What communication was made to you, in the course of that or the following day, as to the result of putting in the tenders?—Perhaps it will be necessary for me to explain on that point. I understood, from Mr. Johnson himself, that he did not mean to tender at the same hour that we had done; I met him on my way to the Commissioner's office; I merely said, "How do you?" I returned again, after I had delivered the tender into the box, and inquired, "if he meant to tender?" he said, "Yes." I inquired, "Have you put in your tender?" he said, "No, I have not done it." "Why," said I, "it specifies twelve o'clock, as the time;" he replied, "Yes, it may be so by the papers here; but I do not mean to be governed by that." I then said to him, "I think, as the time specified was twelve o'clock, the whole of us should tender at that hour; I will therefore see the Commissioner upon the subject." I then went, accompanied by all the gentlemen who had tendered, and I told the Commissioner, as twelve o'clock was the specified time, that I did think it not exactly fair for Mr. Johnson not to tender at the same hour.

477. Did you say this to Captain Ross?—Yes; he said, "I see nothing unfair, Mr. Scott, in the matter; I am not in the habit of closing the box precisely at twelve o'clock." I said, "There will be an appearance of unfairness in it, and several gentlemen have so expressed themselves." Mr. Johnson then put his hand into his pocket, and took out a London newspaper, and he said, "Mr. Scott, I have gone by this; I was not at Plymouth when the tenders were issued; I go by the London paper; here (referring to the London paper) no time is stated." I then said, "I am perfectly satisfied; but," turning to the Commissioner, I said, "I think, as the whole of the others have tendered under an impression that twelve o'clock was the hour, that you will allow us, either to take the tenders out again, or to put in fresh ones."

478. What o'clock was this?—I should imagine a quarter of an hour or twenty minutes after twelve; I think it was about that time. The Commissioner said, "Certainly, Mr. Scott, if you wish for your tender, all of you are equally entitled to take them out again, or to put in fresh ones." With that I was satisfied, and went away.

479. Which of the other persons who tendered, were present at this conversation with Captain Ross?—I believe every one.

480. Was it Captain Ross or Mr. Dent who offered to return the tenders?—Captain Ross.

481. Was Mr. Pearse there?—Yes, he was.

482. Where was this conversation?—Openly, in the Dock-yard, upon the steps.

483. What day's newspaper was this that was produced by Johnson?—I cannot say.

484. Do you remember what newspaper it was?—No; he merely took the newspaper from his pocket, and then I was satisfied. I was vexed with Commissioner Ross upon the subject, and I expressed myself perhaps a little warmly; and he thought so. I then returned to the office to ask Mr. Dent, the secretary, to return me my tender; Mr. Pearse was then present with me, and objected to it; I said, "the Commissioner has given me permission to take it out again, Mr. Dent, and I certainly demand it." Mr. Pearse positively refused to accede to it, and said "it would not be fair;" I said, "very well, I will then give in another tender."

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485. Did you receive your first tender back?—No; immediately on this occurring, I left the yard.

486. Did you, in the course of the 17th, put in another tender?—I think I did.

487. Read your letter of the 18th February, and refresh your memory?—[*After reading the letter*]—I certainly have an impression, that I did put in another tender on the 17th; but I could not swear that I did.

488. Did you read the title of the London newspaper that Mr. Johnson produced?—I did not.

489. Did you read the advertisement?—I did not read it; but I think Mr. Johnson read it to the Commissioner and the whole of us who were present; I did not read it.

490. As he read it, the advertisement specified no hour before which the tenders were to be put in?—Clearly.

491. Did it state that the tenders were to be put in in the course of the 17th?—Yes.

492. Then, after retiring from having this conversation with Mr. Dent, about having your first tender back, did you in the course of that day hold any other communication on the subject of the tenders with any persons connected with the Dock-yard?—Certainly not.

493. Had you any communication with any person connected with the Dock-yard, or with the Breakwater, on the 18th of February, on the subject of the tenders?—Certainly not.

494. Now, on the 18th of February, it appears that you wrote a letter to Mr. Dawson, the Secretary of the Admiralty, in which there occur these words: "Having understood that my Lords Commissioners of the Admiralty had determined to double the quantity of both granite and limestone for the use of the Breakwater;" from whom did you learn that double the quantity of limestone, stated in the advertisement, was wanted by the Admiralty for the Breakwater?—Mr. Stuart, the superintendent, informed each of the parties who made a tender, that it was the intention of Government to double the quantity.

495. When and where did he give this information to the parties?—At the time they went over to examine the sample of stone, and to get the particulars of the specification.

496. Was there any fixed hour at which all the parties tendering went to Mr. Stuart's office, to examine the samples of limestone?—No.

497. How can you undertake to say, then, that he gave this information to all the parties?—Because it was matter of conversation between them.

498. Between whom?—Between the persons who tendered.

499. Where was it a matter of conversation, and when, between the persons who tendered?—The conversation occurred in the Dock-yard.

500. When?—On the day of tendering.

501. At what hour?—I think after I had tendered.

502. Before or after 12 o'clock?—After 12 o'clock.

503. Who was present?—Mr. Sparrow, I remember distinctly, and Mr. Simmons.

504. The question asked you is, who was present at this particular conversation, as to their being informed that double the quantity of limestone was wanted?—Mr. Sparrow and Mr. Simmons; that is all that I can remember.

505. What did they say in this conversation?—We were speaking of the quantity that would be required; he said, "Of course we all know the quantity;" and I said, "Yes."

506. Did they state any thing more about the quantity; did they state that the quantity was 60,000, and not 30,000 cubic feet?—Yes.

507. They stated so to you?—Decidedly.

508. You stated that Mr. Stuart informed the parties of that; do you know of any other of the persons tendering, besides Sparrow and Simmons, being in possession of that information?—Only from hearsay.

509. What have you learnt by hearsay, and from whom?—Mr. Stuart told me himself, that he had given information to every person who meant to tender, that "the quantity would be doubled;" and he also stated to them, "perhaps they might be inquired of at the Commissioner's office, whether they would consent to double the quantity."

510. When did Mr. Stuart say this to you?—I do not remember the day.

511. Was it before or after the day of putting in the tender?—Before; several days

days before; in fact, it was currently reported over the yard, that the quantity was to be doubled.

512. Do you believe that Mr. Pearse knew that the quantity was to be doubled?—I do; I believe, every individual knew it.

513. When did Mr. Stuart first tell you that the quantity would be doubled?—I have before stated, I do not remember the day.

514. As nearly as you can recollect?—I should think about the 6th of February; the 5th or 6th of February.

515. Where did he tell you so?—I believe it was at the library; I think so.

516. In conversation?—In conversation.

517. Was it an accidental meeting?—Yes; I am not positive it was at the library; I think it was.

518. It was not at his office?—No; I had sent the foreman of my quarries to Mr. Stuart's office to look at the samples of stone; I did not attend myself; and on that account, Mr. Stuart told me of it.

519. Were you ever told so at any other time?—I think it must have been repeated two or three times.

520. Are you sure of that?—No; it is impossible I can speak positively, as I never fancied the thing would be examined into.

521. Were you ever told so by Mr. Stuart at any other time, except in that conversation at the library?—I am quite sure that he repeated it to me more than once, for the purpose of my making inquiry; naturally, when the thing was mentioned, it was for me to say, "at what time could this additional quantity be required," because I had to form a calculation about it, and I think, more than twice after that, I spoke about it.

522. Were you told so more than twice, before you put in your tender for 30,000 cubic feet?—Decidedly.

523. Were you ever told so, except in private conversation?—I do not know what is meant by that.

524. Were you ever told that 60,000 cubic feet, and not 30,000, was the quantity the Admiralty required, except in private conversation with Mr. Stuart?—I do not think that I ever was.

525. Was there any public announcement on or before the 17th of February, that the quantity was changed from 30,000 cubic feet to 60,000?—I considered this a public announcement to me, not an advertisement.

526. Did Mr. Stuart announce it to you as a fact, or only as an opinion of his own?—As a fact.

527. You have also stated that you were told so, when Sparrow and Simmons were present?—No.

528. Was the conversation between you, Sparrow and Simmons; or was Stuart also present?—It was between Sparrow, Simmons and myself.

529. Then are you aware that, on that occasion, either Captain Ross or Mr. Dent, or any person connected with the Dock-yard, informed you, or the other parties tendering, that double the quantity of limestone would be wanted?—No.

530. Did you understand from Mr. Sparrow or from Mr. Simons, that they had been aware, previously to the 17th of February, that the 30,000 feet was changed to 60,000?—Decidedly; I hold in my hand a letter addressed to myself, signed by Benjamin Sparrow and Peter Simmons, dated Catdoune, 22d August 1835; in which they say,

"Sir,—In reply to your inquiry, whether we knew at the time of the delivery of our respective tenders for the supply of limestone for the use of the Breakwater on the 17th February last, that 60,000 cubic feet would be required during the year, we beg to inform you, that it was generally known before the day in question; and we made our tender in that belief."

531. Then if you made your tender in that belief, why did you tender for 30,000 cubic feet upon the 17th of February?—Because the Commissioner stated in the advertisement he could only receive a tender for 30,000.

532. Then why did you the next day tender for 60,000 cubic feet?—From the circumstance of believing that I could make some abatement, by taking a larger quantity; the expense of purchasing wheels, screws and jacks would amount to the same thing, almost, for 30,000 as for 60,000.

533. If it was your belief on the 17th, that all parties were informed that 60,000 and not 30,000 would be wanted, what could induce you to reduce your price

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below the price of 8¾*d.* that you offered on the 17th, upon the plea, that you could afford to offer it for a less price, if you were to deliver double the quantity?—I was positive the Commissioner would not receive any tender for 60,000 cubic feet; I therefore complied with the form of the tender in every respect.

534. Why were you so positive that the Commissioner would not receive a tender for more than 30,000?—It was matter of belief only.

535. You have stated that it was on the 5th of February that you got the information from Mr. Stuart, as to 60,000 feet being wanted?—Yes.

536. Long previous to the time of giving in the tender?—Yes.

537. And yet on the 17th of February you tendered for 30,000 feet?—Yes, but I beg to say, that I am wrong as to the date at which I had the information; I remember observing to Mr. Stuart, when he told me the fact, "I suppose now you will issue fresh advertisements;" that brings it to my memory entirely.

538. You first tendered for 30,000 on the 17th of February?—Yes.

539. If you tendered for only 30,000 feet on the 17th of February, how could you have had the information at that time, that you might have tendered for 60,000 feet?—I had no information that I could tender for 60,000.

540. Then how did you obtain the information that you might tender for 60,000 feet, which you did tender for on the 18th?—I before stated, that I complied with the conditions of this advertisement; it then occurred to me, on the following day, that as the expense of purchasing these things was so great, the Admiralty might be induced, on my lowering the price, to accept my tender.

541. But why should you lower your price in expectation of their taking your tender for a larger quantity, when you say, that you had learnt from Mr. Stuart beforehand, that the larger quantity would be wanted, and when, therefore, of course, you must have made your calculation accordingly?—Mr. Stuart told me that as a thing that he believed would certainly take place, but yet it was not advertised.

542. You stated that you were wrong as to the date of your conversation with Mr. Stuart, as to the additional quantity of limestone being wanted; have the goodness to correct that date?—If my life depended upon it, I could not state the day; I know that it was shortly after this advertisement was issued, that I heard from Mr. Stuart that the 60,000 feet would be wanted.

543. Recollect yourself, and state the date, as nearly as you can, of this conversation; you said you were incorrect as to a date: what did you mean?—I merely meant to state this, that it was shortly after this advertisement had appeared that Mr. Stuart told me this.

544. The advertisement bears date the 4th of February, how near was it to the 4th of February?—I should think about the 8th or 9th of February, as near as I can recollect.

545. To whom did you communicate that you had written, or intended to write, to Mr. Dawson on the day following the tender, namely, the 18th February; did you make it known to Captain Ross, or any person connected with the Dock-yard or the Breakwater?—No, I do not think I mentioned it to any individual.

546. Then of your own accord, the day following that upon which the tenders were put in, you wrote to Mr. Dawson, making a tender for the increased quantity, and at a reduced price?—Yes.

547. Had you no communication whatever with any person connected with the Dock-yard or Breakwater, on the subject of putting in this amended tender on the day following the day first appointed?—Certainly not.

548. What induced you to make the tender to Mr. Dawson on the 18th for an additional quantity, and at a reduced price?—The object was to get the contract, of course.

549. But as the advertisement in the paper states the 17th of February to be the day, what made you conceive a tender upon the 18th would have the same effect?—I hardly knew whether it would or not; I sent the letter, at a risk, to the Admiralty.

550. What made you say in your letter of the 18th February, that you were induced to amend your tender by understanding a double quantity was wanted; when you have now told the Committee that you knew that long before you made your first tender?—I say the same now.

551. In your letter to Mr. Dawson, you say, that you are induced to amend your tender, by having been informed that the Admiralty want a double quantity: how do you reconcile that with what you say to-day, that you knew that fact long before

before you made the first tender?—I do not perceive the slightest difference between the two.

552. You think there is no contradiction?—None.

553. Does not that passage in your letter tend to show, that your knowledge of the additional quantity being wanted was subsequent to the time of your making your first tender, since you assigned that knowledge as the cause which led you to amend your tender?—I acted upon the impression that the Commissioner would not receive my tender for 60,000 feet; having tendered for the 30,000 feet in compliance with the advertisement, I then was induced to amend my tender; the one I gave to the Commissioner, the other I sent up to the Admiralty.

554. Does not your letter say distinctly that the cause of your amending the tender is the knowledge that double the quantity will be wanted?—Yes.

555. Was that the sole cause of your amending the tender?—Yes, entirely.

556. You knew it at the time you first made your tender?—Yes.

557. The words are, "having understood that my Lords Commissioners of the Admiralty had determined to double the quantity of both granite and limestone for the use of the Breakwater;" then going on to speak of "none but your own quarry producing the required supplies," you add, "we are induced to amend our tender of yesterday;" does not this imply, that since the period of putting in your first tender, you had received information as to a double quantity being wanted; which information you were not in possession of at the time you put in your first tender?—Whatever may be the impression of the Committee, I positively avow I knew the circumstance several days before.

558. You made that tender in pursuance of the advertisement?—Precisely.

559. And that advertisement was for 30,000 cubic feet?—Yes.

560. But you had understood before that 60,000 feet would be wanted?—Yes.

561. That was your tender specifically, according to the advertisement for 30,000?—Precisely.

562. But if 60,000 should be wanted, you could afford, or whoever got the contract could afford, to supply 60,000 at a less price than 30,000?—Yes.

563. What was your belief as to the point, whether the captain superintendent had power to receive tenders for 60,000 feet?—It is a difficult question for me to answer. Whether he considered himself that he could receive it or not, I do not know; I was afraid to make the offer; I complied merely with the advertisement.

564. Do you believe he had not authority to receive such a tender?—No, I cannot say that.

565. You made the offer on the understanding that only 30,000 would be wanted?—I made my tender expressly on this advertisement.

566. This letter of B. Sparrow and Peter Simmons states, "they had information 60,000 and not 30,000 would be the quantity;" and they say, "we beg to inform you, it was generally known before the day in question, and we made our tenders in that belief?"—Yes, it is so.

567. Have you been obtaining a part of the limestone delivered under that contract from the quarries of Messrs. Sparrow and Simmons?—Yes, I have.

568. You purchase of Sparrow and Simmons a part of the limestone which you have delivered, or propose to deliver, under your contract?—Precisely.

569. Were your quarries in active work during the winter previous to this contract?—I had just bought the quarries a few months before, and I was really ignorant of the matter altogether.

570. Had you, in the month of January previous to the tender, prepared stones that would serve for the Breakwater?—Immediately after I had bought the quarries, as large stones came out, I put them by for the service of the Breakwater; being convinced that no other quarries in the neighbourhood are at all equal to mine for stone for the use of that work.

571. You had prepared, or caused to be prepared before the 17th of February, limestone at your quarry for the use of the Breakwater?—At a risk.

572. Such limestone as you thought might be required for the use of the Breakwater?—Yes.

573. Were those blocks dressed?—They were dressed.

574. What quantity had you so prepared, or caused to be prepared?—I should imagine—it is mere matter of opinion—there must have been about 3,000 cubic feet, or upwards; I think I commenced immediately I bought the quarries.

575. Was there any sale for limestone so prepared, except it was wanted for the use of the Breakwater?—Yes.

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576. Was there any demand for limestone prepared in that way?—Two persons came to me from, I think, the neighbourhood of Exeter, and wanted to purchase some at a higher price.

577. Limestone so prepared?—Yes.

578. When did you first hear of the prices delivered in by the other parties who tendered on the 17th?—This Parliamentary paper was my first information of the greater part of the prices.

579. Do you think it was a fair proceeding on your part to put in a tender, after the day specified for putting in tenders?—I certainly did not consider it unfair, or I should not have done it.

580. Did you not object, in the Dock-yard, to Messrs. Johnson putting in a tender, after the time which you thought to be the time fixed for putting tenders in?—Yes, I did.

581. If you thought it wrong that Mr. Johnson should put in a tender on the 17th at an hour subsequent to the hour fixed, why did you not think it wrong for you to put in a tender on a day subsequent to the day fixed?—Because an objection was made to the withdrawal of my tender.

582. Do you know of any tender having been received from any party on the 17th after twelve o'clock?—It is impossible for me to know it.

583. What prevented you from putting in the tender, contained in your letter of the 18th, on Friday the 17th?—There was no objection, but I gave the thing more consideration the following day.

584. According to your understanding, the time was not to be limited to twelve o'clock; and whether you got your tender back or not, according to your statement, you might have put in an amended tender in the course of that day?—Yes, I might.

585. And you did not?—I did not; I gave it more consideration and more calculation the next day.

586. You said your first impression was that you had put in a second tender that first night?—We are now speaking of the 60,000.

587. You were asked whether, after twelve o'clock on the 17th, you did or did not put in a second tender, at Plymouth Dock-yard?—Yes.

588. And you then stated you were uncertain whether you did or not?—Yes, that my impression was I did, and I still adhere to that; I fancy so.

589. If you put in a second tender on the 17th, what occasion was there for you to write on the 18th?—I am not positive about that.

590. What was the nature of the second offer you made on the 17th?—The thing appears merely a floating idea in my mind; I cannot tell whether it was so or not; the thing was so much annoyance at the time, that I cannot tell.

591. Do you know that Johnson put in a tender for limestone at 8 *d.*?—I have heard it.

592. When did you hear it?—This very day.

593. Did you hear it before this day?—Never.

594. From whom did you hear it this day?—Mr. Johnson himself.

595. Did you ever hear of any remonstrance having been made on the subject of your having been allowed to put in a tender subsequent to the 17th?—No.

596. Did you ever hear of Johnson having made a remonstrance on the subject?—This day only, from Johnson himself.

597. You never heard of it at Plymouth?—No, I never heard of it until this morning; I expressed my surprise to him, that I had never heard it before.

598. Had you any communication with Johnson respecting the price of granite, or of limestone, about the time of putting in the contract, shortly before or shortly after?—I think I had.

599. What was the nature of that communication?—I am positive I had; I remember it distinctly.

600. What was it?—There was a fear in my mind that I would not be able to get the granite for which I had tendered, so soon as it might be required; I therefore asked Mr. Johnson if he would accommodate me with some, if necessary.

601. That related to the granite only?—To the granite only.

602. Did you speak to Captain Ross about 12 o'clock on the 17th of February in the Dock-yard?—Yes.

603. What took place between you and Mr. Ross?—It was shortly after twelve.

604. State what passed?—Mr. Johnson had told me, as I mentioned the circumstance before, that he had not put in his tender.

605. Shortly

605. Shortly before the hour of the tender, did you meet Captain Ross, and shake him by the hand?—I think I did, in passing.

606. And did you hold conversation with him?—No.

607. You held no conversation with him?—None.

608. You merely passed him, and shook him by the hand?—He was standing on his step, with Mr. Johnson by his side; I was not aware Johnson was in the neighbourhood; I shook hands with both, and I pointed to the clock: it wanted two or three minutes of twelve; I ran to the office, and put in the tender, when the clock struck twelve.

609. Between the 18th and the 25th of February, did any thing pass between you and Captain Ross, or any other party connected with the Dock-yard or Breakwater; or between you and the Admiralty, on the subject of the tender?—Yes.

610. Now state what it was?—I think, on the 19th of February I came to London, and wrote a note to Mr. Dawson, requesting to see him for a few moments; after I had waited I suppose an hour and a half, I left the Admiralty, returned again a second time, and saw him.

611. Had he, at that time, received your letter of the 18th; state what passed?—I told him I had taken the liberty to call on him, to ask whether my second tender had arrived in time? He rang the bell to inquire; he desired a clerk to bring the tender, or to inquire, I cannot tell which. I then said, I was anxious to explain to him, that Mr. Pearse, I understood, had tendered by the ton; that the advertisement stated by the cubic foot; I then explained to him the difficulty of calculating by the ton. I think I ought to have stated, that when I first saw him and inquired if my tender had been delivered and received in time, he said, "bring them up;" he then said "yes;" "then," I said, "I am all right, my tender must be accepted." I explained to him, that the offer by the ton would admit of disputation, twelve feet being the customary estimation of the ton by the trade; but that engineers, I was told, calculated thirteen; I do not know that any thing else occurred. I do not remember that any thing further occurred on the subject of the limestone than that.

612. How came you to know that Mr. Pearse had tendered by the ton?—The morning of the day that we tendered, I had sent my foreman round to the different quarries, to see what each could raise or produce; he fell in with Mr. Pearse's foreman, I think his name was Pinch, and he asked him, "if his master meant to tender?" and he said "yes." "Why," said my foreman, "he never could attempt to tender, he has no means of supplying the stone." The reply was, "he does, he means to tender, and I do not think he can do it for less than 8*s.* 4*d.* per ton."

613. Had you any idea of the amount of the other tenders?—None.

614. How came you to say to Mr. Dawson "you were all right, you must have the contract?"—I had an understanding with Sparrow and Simons; they told me, both of them, when they left the yard: it is a common thing, after the tenders are given in, to speak of what the tenders are.

615. What did Mr. Dawson reply to this representation of yours respecting the calculation per ton; and your inquiry, whether you were in time or not?—I do not remember that he made any observation on it; he asked me to show it clearly how it was; and I divided it in pencil, I divided 8*s.* 4*d.* by 12, to show what the price was.

616. Did you think it was quite fair in you, who were a tenderer, to have this conference with Mr. Dawson, and to make representations to him to the prejudice of the tender of the rival competitor, Mr. Pearse?—I did not consider the remarks at all prejudicial to him; it was mere matter of calculation.

617. Would you have liked that Mr. Pearse should have had a private interview with Mr. Dawson, for the purpose of making remarks to the prejudice of your tender?—Under similar circumstances, certainly; it was information, I consider.

618. Did you see in Mr. Dawson's possession your amended tender; you said the tenders were brought up; was your letter of the 18th of February brought up to Mr. Dawson?—I think they were altogether.

619. Did you see that amended tender?—I never saw either of them. I saw them held in Mr. Dawson's hand, but nothing further than that.

620. Was this the whole of what passed between you?—I should think so, on that point.

621. The Committee do not want to ask you concerning conversation relating to other matters than the tender; but was this all the conversation that passed between you and Mr. Dawson on the subject of the tender?—I think it was.

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622. Did you say any thing to him about Mr. Pearse, except what you have told the Committee as to his tender being 8*s.* 4*d.* per ton?—Yes, I think I remarked, that it was impossible for Mr. Pearse to fulfil his contract.

623. Did you say why?—That he had not the means.

624. Did you explain to Mr. Dawson what you meant by his "not having the means?"—Yes, I think Mr. Dawson also asked me if I knew any thing of him—of his character?

625. Yes?—Yes, I fancy so.

626. What answer did you give to that?—That his character was too well known.

627. Did you explain what you meant by that—that may have many different meanings—did you explain to Mr. Dawson in what respect "his character was too well known?"—I think I told him, that he was constantly under arrest by some person or other.

628. You think you told him that?—Yes, I think I did.

629. Are you quite certain you said something to him about Pearse's means?—Yes, I am clear I did; he asked me the question.

630. That came as a question from him, and not as a voluntary communication from you?—I think not; I think he asked the question.

631. Now will you be sure about that?—I cannot be sure.

632. Who first began to talk about the character of Mr. Pearse, you or Mr. Dawson?—I cannot positively say who began it; I remember stating that he could not fulfil his contract; but whether that was prior or subsequent to the question being asked me, I really cannot tell.

633. Did any thing pass between you and Mr. Dawson, as to the means and character of any of the other tenderers, besides Mr. Pearse?—None.

634. Did you know at that time that the question lay between you and Pearse?—I think I did; I fancied so from the first, and for this reason: that there was no person in that neighbourhood that could compete with me.

635. But Pearse?—I was sure that he could not compete with me.

636. Did any conversation take place about the additional quantity of limestone, 60,000 instead of 30,000 feet?—I believe not.

637. Did you not ask to have that point, which was very material to you if you were to get the contract, determined?—I asked the question at first, whether my letter had been received, which expressed as to that.

638. Having written a letter on the 18th tendering for the double quantity, and thinking it necessary to come up to town the following day, the 19th, did you not take that opportunity of inquiring of Mr. Dawson, whether 60,000 cubic feet would not be wanted instead of 30,000?—I do not think I even asked the question.

639. Then you have stated all that passed between you and Mr. Dawson?—I do not remember any thing more on the subject of the limestone; there may have been some remarks respecting Pearse's character; I think Mr. Dawson asked me some question about him; but really so many months have elapsed, I never thought of it again since.

640. How long did you stay in town?—Four or five days; I had other business in town as well.

641. Had you any subsequent interview with Mr. Dawson, during your stay in town on this occasion?—I think I had.

642. Are you sure whether you had or not?—I never had any communication with him respecting the limestone again; I ought to have said, in the first place, that my tender was for both limestone and granite.

643. In your letter of the 18th you proposed lower tenders for granite as well as the limestone, than you had before made?—For both.

644. Did you see Mr. Dawson after the 20th of February?—I left Plymouth on the 19th, and arrived in town on the 20th.

645. Did you see Mr. Dawson on the 20th?—Yes, it was on the 20th I saw him.

646. At what time of the day was it you saw him?—I think it must have been about three o'clock.

647. On the 20th?—I think it was the 20th.

648. How long did you stay in town?—I think I must have been here a week; I had other business, as a brewer, in town, purchasing hops.

649. Can you tell the Committee when you next saw him: having seen him first on the 20th, what was the next day you saw him?—I think it must have been a day or two before I quitted town.

650. Recollect

650. Recollect the date?—I must have been in town six or seven days.

651. Did you see him once, or more than once?—I saw him twice.

652. Twice after the first time?—No, once.

653. Did you hear from him, at this second interview, that the order had been sent down that you should have the contract?—I did not.

654. Did any thing more pass at that time, with reference to this contract for the limestone?—No; I think the second time referred entirely to the granite.

655. Did you hear, the second time, that Mr. Taylor, the civil architect, had made Pearse's tender the lowest?—That was the first time.

656. You were told by Mr. Dawson, the first time, that Mr. Taylor had made Pearse's tender the lowest?—I never heard Mr. Taylor's name mentioned.

657. You heard that somebody had done so?—Yes, I think I heard that, which brings it to my recollection. Really, I never fancied the thing would be at all mentioned to me a second time, and I cannot recollect it; I will not conceal any thing from you.

658. Did you, in your first interview with Mr. Dawson, hear from him, that some person, an official person at the Admiralty, had made Mr. Pearse's tender the lowest?—I certainly heard 7*d.* mentioned, and that brings to my mind the reason why I told him the calculation was wrong; that 12 feet only were to the ton; I could not recollect just now why I told him that; the question brings it to my mind.

659. What happened, as nearly as you can recollect, at this second interview you had with Mr. Dawson?—I think I asked him, if I had the contract for granite; on which he said "No."

660. If he was able to tell you that you had not the contract for granite, did not any question pass as to whether you had the contract for limestone?—No, I never remember hearing that from him in any way.

661. Try your recollection; when it appears that you did ask, whether you had got the contract for granite, recollect whether any thing passed as to whether you had got the contract for the limestone?—I cannot.

662. When did you first know you had got the contract for limestone?—I think, the day I left town, I heard it.

663. From whom did you hear it?—I think Sir James Cockburn told me of it.

664. Had you any intercourse with Sir James Cockburn, on the subject of your contract, beside what you now refer to, of Sir James Cockburn telling you that you had got the contract?—Yes, I mentioned the circumstance to him, the object of my journey to town; and among other things, stated this, of the tender for the granite and limestone, both.

665. After you came to town, what passed between you and Sir James Cockburn?—It was in consequence of my not getting an answer to the note which I wrote to Mr. Dawson, that I called on Sir James Cockburn.

666. You sent the note on the 20th?—It was the day I arrived; whether it was the 20th or not, I do not know. Sir James Cockburn stated he would accompany me to the Admiralty to see Mr. Dawson, and get the information for me; he was present during the conversation with Mr. Dawson.

667. Did any thing further pass between you and Sir James Cockburn at that interview with Mr. Dawson on the 20th, than you have already related as passing between you and Mr. Dawson?—No.

668. Did you see Sir James Cockburn, after that interview with Mr. Dawson was over?—We returned together from the Admiralty.

669. Did any further conversation take place between you and Sir James Cockburn on your way back?—I believe not on that point; I think we had no reference to the contract.

670. You say, you heard from Sir James Cockburn, that the contract had been awarded to you?—Yes.

671. What further passed between you and Sir James Cockburn, on that occasion, than his giving you this information?—I did not wish to trouble Mr. Dawson, and I therefore asked Sir James Cockburn if he would have the kindness to get the information for me, whose tender had been accepted.

672. Now when Sir James Cockburn told you that you had obtained the contract, what quantity of limestone did you suppose you were to deliver, and at what price?—I do not believe any mention was made of quantity; I understood, most distinctly, that my tender for 60,000 feet had been accepted.

673. And at 8*d.*?—Yes.

674. Had been accepted?—Yes.

675. Did

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675. Did any thing further pass between you and Sir James Cockburn, during your stay in town, except what you have already related?—I believe not, on that matter.

676. Was any communication made to you by Sir James Cockburn, beside what you have already stated?—No.

677. Then you returned to Plymouth?—Yes.

678. Was this communication made to you by Sir James Cockburn on the day you were going to leave town?—The day before, I think.

679. That was after the last interview you had with Mr. Dawson?—Yes.

680. And it was the first time you knew of your having the contract?—Yes; I do not know whether it was after the last time I had seen Mr. Dawson, or not; Sir James Cockburn told me this, the day before I had seen Mr. Dawson.

681. Then, when you saw Mr. Dawson, before quitting town, you were aware that you had the contract for the limestone?—Yes.

682. Were you aware, at that time, that Mr. Johnson had made a tender for the limestone?—No, I never heard of Mr. Johnson until to-day.

683. You knew that Mr. Johnson had put in a contract for the granite?—Yes, I expressed my surprise, when I met him here to-day, and he told me of the limestone.

684. Were you informed, during either of these interviews, either with Mr. Dawson or Sir James Cockburn, that Mr. Johnson had sent a remonstrance to the Admiralty on the subject of your being allowed to put in a tender after the 17th of February?—No.

685. You confine your statement of what passed during your first interview with Mr. Dawson, to the limestone; state what passed about the granite?—I inquired whether my tender had been accepted; he said "No."

686. This is the first interview?—Yes, I think he said it was before the Board at the time; he rang the bell, and got the papers from the Board; and I think he said the Committee were sitting.

687. When did you get the official information from the Admiralty, that your tender for the limestone was accepted?—I do not think I ever received any official communication.

688. Was that verbal communication of Sir James Cockburn considered as tantamount to an official communication?—The Commissioner apprized me of it.

689. Do you mean that on your return to Plymouth the Commissioner gave you official notification that your tender was accepted?—No, I think the Commissioner had written a letter to apprize us of it; it was addressed "Robert and Edward Scott," and my brother had it.

690. Before your return?—Before my return.

691. What passed at your first interview with Mr. Dawson, about the granite?—I think the question I asked, in common with others, was, whether my tender had been accepted? I am not clear—I think he stated it was then before the Board.

692. Did you know, at that time, who was the competitor with you for the granite, in point of nearness; did you know between whom the struggle would be for the granite?—No, I did not.

693. Did any thing pass about Johnson and the granite, at that time?—I do not remember that Johnson's name was mentioned.

694. Did any thing more pass about the granite, than what you have told us?—I do not think there was.

695. Have you not already stated that you asked Mr. Dawson, on that occasion, whether you had the contract for the granite, and Mr. Dawson said "No?"—That was the second time.

696. Did you know, before you left town, who had the contract for the granite?—Yes, I think I knew Mr. Johnson had it.

697. Subsequently, you obtained the contract for the granite, did you not?—Yes, and I complained very much that I did not have it before, as I thought I ought to have it.

698. Look at page 2 of the Parliamentary paper; there is "Scott, 8¾*d.*;" then again, there is "Scott, 9*d.*?"—I had an impression on my mind, all the time I have been here, that I put in a second tender on the 17th; I could not positively state it; that is the second price.

699. Which was the first tender—the 8¾*d.* or the 9*d.*?—The 9*d.* was the first.

700. And then you amended it to 8¾*d.* and put that tender in on the 17th, after 12 o'clock?—Yes; I had scarcely got into business; it was very difficult for me at

at all to calculate; it was only on the following day, in a calculation with a man, that I was enabled to make that amended tender.

701. When you returned to Plymouth, what was the next proceeding that took place on the subject of the limestone contract?—I received a letter from the Commissioner, requesting me to appear with my bondsman to sign the contract.

702. Of what date was that letter?—I think I have it; on the 7th of March.

703. Produce the letter?—

Gentlemen, Plymouth-yard, 7th March 1835.

In reference to my letter of the 4th instant, I request you will attend at my office on Tuesday morning next, at twelve o'clock, with your surety, to execute the contract and bond for the supply of limestone for the service of the Breakwater.

I am, Gentlemen, your most obedient servant,

(signed) *Charles B. H. Ross.*

704. To what did the letter of the 4th, herein referred to, relate?—That must have been a letter, apprizing us of the contract having been given to us.

705. Have you that letter of the 4th?—I have not.

706. Did you, in consequence of this letter of the 7th of March, attend with your surety?—I did.

707. When did you attend?—I cannot say at what date.

708. How many days afterwards?—It was on the 10th.

709. What were the terms of the contract that it was then proposed to you to execute?—Mr. Dent, the Commissioner's secretary, had prepared the contract for 30,000 cubic feet of limestone at 8*d.*; I complained of it, and stated, that my offer was, 60,000 cubic feet at 8*d.*; or 30,000, the former contract, at 8¾*d.* I said, he must either give me the larger quantity with the smaller price, or the smaller quantity with the larger price. He then requested the Commissioner would attend. I stated the circumstance to the Commissioner, and said, I was quite positive that my last tender had been accepted, and requested that he would draw out the contract for 60,000. He refused to do so; and, in consequence, as I had my bondsman there, he said "The thing can be corrected afterwards; I have no positive orders to draw out a contract for 60,000; the letter from the Admiralty merely states, that your tender is accepted; without specifying which."

710. Did you execute the contract then?—Yes.

711. What was the price inserted?—Eight-pence three farthings.

712. Thirty thousand at 8¾*d.*?—Yes; I immediately wrote to the Board, on that very day.

713. That is the letter of the 10th of March 1835, printed at page 3 of the Parliamentary paper?—Yes.

714. Did you receive an answer?—I did.

715. Produce the answer?—Here it is.

[*The Witness produced the same.*]

716. Did you communicate, in consequence, with Captain Ross?—I did.

717. When?—A day or two afterwards.

718. Well, what took place?—I think Mr. Dent told me, that he had not the bond from the Admiralty; he must first write to get another bond, and he must write to the Admiralty.

719. Did Captain Ross address to you a letter of the 14th of March, your reply to which is printed at the bottom of page 3, Parliamentary paper?—Yes, and here is the letter.

Gentlemen, Plymouth-yard, 14th March 1835.

Mr. Stuart having reported to the Lords Commissioners of the Admiralty, that 30,000 feet of limestone will be required for the service of the Breakwater, in the course of the present year, in addition to the quantity stipulated to be delivered by your contract of the 10th instant, I request you will inform me whether you are willing to supply that further quantity on the same terms, or at a lower rate.

720. Did you then write the letter printed at the bottom of page 3, dated 14th March?—Yes, I did.

721. What was the meaning of the words contained in Captain Ross's letter, "on the same terms:" did you understand by that 8*d.* or 8¾*d.*?—I did not know what letter they might have written to him.

722. Did you understand by "the same terms" that he meant 8¾*d.*, or 8*d.*?—I think he meant 8*d.*

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723. When you, in the letter of the 14th, said, "you will be perfectly ready and willing to supply 30,000 cubic feet more on the same terms as before, which is 1¾ *d.* less per foot than was ever paid for any similar contract," to what price did you refer?—I referred in that to 8¾ *d.*

724. After sending this letter of the 14th of March to Captain Ross, what was the next step that took place?—I think we entered into a bond; there was a correspondence between them and the Admiralty, and on the 26th of March we entered into the contract.

725. Is that what you mean by the bond?—Yes.

726. That which is No. 4, of page 4, of the printed papers?—Yes.

727. What price was inserted in that contract when you first signed it?—8¾ *d.*

728. What was the date of it?—The 26th of March.

729. In your letter of the 14th of April, there occurs this expression, "We hope you will, in justice to ourselves, permit us to remind you, that we expressly stated the same fact, and contended our offer was 8¾ *d.* for 30,000 cubic feet, or 8 *d.* per foot for 60,000 cubic feet." What do you mean by "the same fact?"—When I have read the letter I shall be able to bring it to my mind. [*The Witness read the letter*]. With regard to the 60,000 feet at 8 *d.*, which I was satisfied it was the intention of the Admiralty that I should have contracted for.

730. What is the date of the conversation that is referred to in that letter of the 14th of April?—The day of the signing the first contract.

731. The 10th of March?—The 10th of March.

732. Then the contract of the 26th of March, in the state in which it first stood, was for 60,000 cubic feet of limestone at 8¾ *d.*?—Yes.

733. Was that a different instrument from that which you signed on the 10th of March, or was it the first instrument altered?—I think it was a second instrument.

734. How soon afterwards did you hear of any thing respecting this contract of the 26th of March?—I believe, the Commissioner's letter of the 13th of April.

735. Produce it?—This is it:

Gentlemen, Plymouth-yard, 13th April 1835.

It appearing to have been explained by the Secretary of the Admiralty to the Storekeeper General, that in agreeing with you for the supply of limestone for the service of the Breakwater, it was the intention of the Board to accept your reduced offer of the 18th of February of 8 *d.* per ton, for the whole quantity, I acquaint you that your contract has been returned to me for the purpose of being altered accordingly, and I have therefore to request that you will signify to me whether you are willing to adhere to these terms, and to authorize the alteration of price.

736. Your reply of the 14th follows in the printed paper?—Yes.

737. What do you mean by this, "from the apprehension that blame might otherwise be imputed," the expression just at the end of the letter of the 14th?—I fancied blame might be imputed to the Commissioner, for not having drawn out the contract in the first place for 60,000 feet at 8 *d.*, which I was convinced was the intention of the Admiralty. I was also fearful Mr. Dawson would be angry with me, for having afterwards required the 8¾ *d.*, from the advance of wages of the workmen.

738. Had you at any time a contract signed for 60,000 feet at 8¾ *d.*?—Yes.

739. Was it upon a contract at 8¾ *d.* that Captain Ross called upon you to submit to a reduction of the price; which, at first, you declined?—Yes.

740. Then, subsequently to the writing this letter of the 14th of April, did you agree to make an alteration in the contract, reducing the price from 8¾ *d.* to 8 *d.*?—Yes, on the same day, but subsequently.

741. And the alteration was made?—Yes.

742. Was it made by an erasure in the same contract?—I think it was; I am pretty sure it was.

743. Have you delivered limestone in pursuance of that contract?—Yes.

744. About how much?—I suppose about 35 or 36,000 feet.

745. How was it, when you stated in your letter of the 18th that "no other quarry but yours could produce the required supply," that you were obliged to go to other quarries for assistance, so very soon afterwards?—I kept my men at work all the winter; the consequence of which was, the stones were lying on the quay, and I could not get access to them; there was no room to take the large Breakwater stones, and lay them on the quay. There was only one spot I could get the Breakwater stones away from.

746. Then

746. Then your own premises were so crowded, that you could not ship your own wrought stones in time?—Not exactly that.

747. What was the reason for your not being able to deliver as fast as required?—It is not the delivery, but not being able to place them on my quay; the common lime so crowded the place that I had not room to take the stone away.

748. Does it not come to this, that your premises were so crowded, you could not deliver the limestone?—I could not place them.

749. Did any strike for wages take place, such as is referred to in your letter of the 14th of March?—No, I had agreed to increase the wages.

750. You say, "We beg to acquaint you, that as our foreman of the quarries has just stated that our workmen had manifested a disposition to follow the example of a neighbouring quarry, and strike for an increase of wages." In what quarry was it that a strike for wages took place?—Messrs. Johnson's.

751. Was the strike general?—Yes.

752. Of all the masons doing that sort of work?—I believe every individual of Johnson's struck.

753. And in other quarries also?—No, only Johnson's.

754. Where is Johnson's quarry?—The other side of the river to mine; the river separates.

755. Had you to pay any increase of wages to your workmen?—I had.

756. For how long a time?—To the present period.

757. What was the rise of wages?—I think the wages of the men would be a farthing a foot additional; but to the person who contracts to raise the stone, I was obliged to raise his allowance, also.

758. And that rise has continued to this day?—Yes.

759. According to the custom of the trade, how many cubic feet are there in a ton?—Twelve.

760. And is that the decided custom of the trade?—Decided.

761. When you deliver the stone to the clerk appointed to receive it, is it measured or is it weighed?—Measured always.

762. And in the state in which it is measured, when it is dressed, fit to deliver to the Breakwater, how many cubic feet go to the ton?—I cannot say; but the customary measurement of the place has always been, that the immense quantity that has been supplied for the building of the Breakwater in former days, and other works, has been so.

763. How many cubic feet go to the ton, as the stone is delivered to the Admiralty?—I positively cannot tell the corresponding quantity per measurement.

764. If the advertisement had been for tons instead of cubic feet, in making your tender you would have calculated on 12 cubic feet to a ton?—Decidedly.

765. Twelve cubic feet at 8 *d.* would make 8 *s.* a ton, would it not?—Yes.

766. Then you conceived you had tendered to supply at the rate of 8 *s.* a ton?—Yes.

767. Do you know that it has actually been so?—I believe it has been so. I have seen in the papers the charge that has been made, and I naturally wished to ascertain from all the old quarrymen who had been in the habit of supplying limestone to the different public departments, what the regular custom of the place was; and every one of them, without exception, told me 12 feet to the ton.

768. You state that, to the best of your opinion, you have, in point of fact, supplied the stone at the rate of 8 *s.* a ton?—Yes; I say even lower than that, because of the manner in which the stones are measured; if the stone be not properly squared, if there be an inch or two on either side of the stone not regularly squared, that reduction is made off the measurement.

769. You have told us that you understood from Mr. Johnson, he did not mean to tender at 12 o'clock?—Yes.

770. In point of fact, did his tender go in at the same time as the other tenders?—No.

771. Did he tender at all?—I only know that he did, from his own observations and from the papers.

772. You thought you had some ground of complaint on account of Mr. Johnson having some preference shown him?—Yes.

773. Who is Mr. Johnson; is he an elector of Plymouth?—Yes.

774. Is he an elector of Devonport?—I do not know; he is a man who has powerful influence.

775. Did he support Mr. Dawson at the Devonport election?—Decidedly; I know

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know that he is a supporter of Mr. Dawson, most decidedly, both of Mr. Dawson and Sir George Cockburn.

776. Were you a supporter of Sir George Cockburn and of Mr. Dawson?—Yes.

777. Are you a voter for both places?—Yes.

778. And canvassed and took an active part for both those places?—Not for Devonport, only for Plymouth.

779. You voted for both?—Yes; I do not mean to say I did not ask some votes for Devonport.

780. There was a Devonshire election recently: did Mr. Johnson support Lord John Russell, or his opponent?—Mr. Parker, decidedly.

781. In point of fact, did you walk arm in arm with Captain Ross, before the tender?—I never walked arm in arm with him in my life.

782. Had you any conversation with him?—Never, I had no conversation with Captain Ross, either directly or indirectly, except when we came to sign the contract.

783. You only shook hands with him?—Nothing more than that.

784. You have got the contract for granite?—Yes.

785. For the double quantity?—Yes; indeed I consider I have been used very ill.

786. You were a supporter of Mr. Dawson?—Yes.

Mercurii, 26° die Augusti, 1835.

HENRY WARBURTON, ESQUIRE, IN THE CHAIR.

Captain *Charles B. H. Ross,* called in; and Examined.

Capt. *C. B. H. Ross.*

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787. HAVE you an Admiralty letter of the 28th January 1835, relative to the Plymouth Breakwater?—Yes; it is a letter from the Admiralty, directing me to cause tenders to be made for such a quantity of limestone blocks as Mr. Stuart may consider will employ his establishment of workmen for the present year.

[*Hands in the same.*]

788. Have you a letter of the 4th of February?—Yes, from me to the Admiralty, transmitting copy of advertisement for tenders for 30,000 feet limestone, with an estimate of charges for the Breakwater for the year, and of the quantity of limestone which can thus be provided for.

[*Hands in the same.*]

789. Have you a letter of 11th February 1835?—Yes, from the Admiralty, stating that the sum to be voted for carrying on the works is 10,000*l.*, which is to cover all expenses.

[*Hands in the same.*]

790. Have you a letter of 17th February 1835?—Yes; a letter from myself to the Admiralty, transmitting the several tenders, and requesting that the accepted tenders may be returned to me, with blank form of contract and bond.

791. Did you state in that letter what the tenders were that you transmitted?—No, it is not usual; we take a memorandum, and keep it in our office.

792. Endeavour to recollect whether you transmitted Johnson's tender with the others?—I should say certainly.

793. Can you, on your return to Plymouth, by consulting any documents there, make this point absolutely certain?—Yes, I can do that; my secretary makes a memorandum of the tenders, as I read them to him; they are then transmitted direct, in my presence, to the Admiralty.

794. What is the next document you have?—The 20th February 1835; a letter from the Admiralty to myself, desiring me to report the preferable plan of delivering the stone, whether at the Breakwater or the Catwater.

[*Hands in the same.*]

795. What is the next?—My letter of the 23d February to the Admiralty, stating that preference should be given to the delivery of the stone at the Breakwater.

[*Hands in the same.*]

796. Was your recommendation that the stone should be delivered at the Breakwater, in preference to the Catwater, complied with?—Yes, it was. The next

next is the Admiralty letter, of the 25th of February, to myself, stating that their Lordships had decided to give the contract for limestone to Messrs. Scott; desiring me to enter into the necessary arrangements, and take security; and the contract for the granite to Johnson is mentioned in the same letter. Capt. C. B. H. Ross. 26 August 1835.

[*Hands in the same.*]

797. What is the next?—My letter of the 27th of February, to the Admiralty, requesting that the tenders approved of should be returned, in order to enable me to enter into the proposed contract.

[*Hands in the same.*]

798. What was the next?—Upon the 5th of March I received back the tenders approved of under a blank cover.

799. What tenders were transmitted to you?—I think there was one of Scott's for the limestone, and one of Johnson's for the granite.

800. And was the tender of Scott for the limestone that was transmitted to you, that for supplying 30,000 cubic feet at 8¼*d.*?—Yes.

801. Have you a letter from the Admiralty, of the 12th March, to yourself?—Yes; stating that the contract with Messrs. Scott was to be extended to 60,000 feet of limestone, provided they were willing to supply the additional quantity on the same terms.

[*Hands in the same.*]

802. Was the accepted tender which you received, the original or the copy?—The original, I should imagine. I do not apprehend that they send copies.

803. Have you a copy of your letter of the 14th March to Messrs. Scott's, desiring to know whether they are willing to supply the additional 30,000 feet on the same or on lower terms?—Yes.

[*Hands in the same.*]

804. Have you a letter of the 15th March to the Admiralty, transmitting Messrs. Scott's reply, with their original and amended tenders?—This is it.

[*Reads, and hands in the same.*]

805. What was the amended tender—the tender for the additional quantity of 30,000 feet?—Yes.

806. And at what price?—At 8¼*d.* I have here Messrs. Scott's reply to me, dated 15th March.

[*Reads, and hands in the same.*]

807. Then, upon the 18th March, is there a letter from the Admiralty to yourself, directing that a new contract be entered into by Scott, for the whole quantity of limestone?—Yes, here it is.

[*Hands in the same.*]

808. Then is there a letter of the 20th March, from the Storekeeper-general to you, transmitting blank forms of contract and bond to be entered into with Messrs. Scott for the additional supply of 30,000 feet of limestone, agreeably to their tender, forwarded with your letter, 15th March?—Yes.

809. Is not that somewhat contradictory to the Admiralty letter of the 18th, which says, "A new contract should be entered into for the whole quantity of 60,000 feet?"—Feeling that, this was the memorandum I made: "It will be remembered, that the price for the original supply of 30,000 feet was 8¼*d.* per tender 17th February, delivered at this office; whereas the tender of the 18th February, sent here from the Board, was for the whole quantity, 60,000 feet, at 8*d.* I had no authority, then, to recognize any thing beyond the tender for the first quantity; and Mr. Scott contended, that unless the first contract was made for 60,000 feet, the price of 8*d.*, which was regulated by the quantity, could not be recognized either; and I decided, that I knew nothing of any other tender than the one for 30,000 feet, which I had received, pursuant to advertisement. Subsequently however to this, the contract was returned here, for Messrs. Scott to reduce the price to 8*d.*: which they did, and the whole quantity now stands chargeable at that price."

810. What was the date at which you made that memorandum?—Since I have been summoned; this is my view of it.

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811. Then, on the 26th of March, did you write a letter to the Admiralty, transmitting the executed contract and bond for 60,000 feet, at 8¾*d.*?—Yes.

[*Hands in the same.*]

812. After the 26th of March, when did you first hear that that contract was disapproved of, by reason of the price being 8¾*d.* and not 8*d.*?—It was immediately after.

813. How long after?—In a day or two, or perhaps the very next day.

814. Was that letter [*handing it*] from you to Messrs. Scott, dated the 13th of April, written by you to them, immediately on your receiving a letter from the Admiralty, informing you that there was an error in the price?—Yes, upon the 13th I wrote to Mr. Scott.

815. Then what is the date of the letter from the Admiralty, pointing out to you that error as to price?—I do not appear to have got that.

816. At former tenders, have you been in the habit of announcing to parties tendering, on opening the tenders, whose tender was the lowest?—No.

817. In fact, it is the Admiralty, and not the superintendent of the Dock-yard, that decides?—The Admiralty decides, and not me.

818. Have you been in the habit of examining tenders for contracts?—Yes.

819. Look to the copy of the advertisement on the 4th of February, and read it?—I have done so.

820. Does not that advertisement distinctly state that the tenders are to be made in cubic feet; that is, at the price of so much per cubic foot?—Yes; it says "persons willing to deliver about 8,000 cubic feet of wrought granite, and at the same wharf, in Catwater, about 30,000 feet of wrought limestone."

821. Read the passage in the advertisement which states that the tender is to be made at so much per cubic foot?—"Persons willing to supply and deliver, either at the Breakwater in Plymouth Sound, or at a wharf in Catwater, Plymouth, about 8,000 cubic feet of wrought granite, and, at the same wharf in Catwater, about 30,000 feet of wrought limestone."

822. Does that advertisement state that the tender is to be made in the terms you mention, namely, at so much per cubic foot?—Yes.

823. Does not the advertisement express that the quantity required is about 30,000 cubic feet of wrought limestone; but does it express that the tender is to be made at so much per cubic foot, and not at so much per ton?—Yes, it does.

824. Point out the passage in which that direction is contained?—In this advertisement it says, 8,000 cubic feet of wrought granite, and about 30,000 feet of wrought limestone.

825. Is not 30,000 feet the quantity required; does that prescribe in what terms the tenderer is to make his tender?—It means, that he is to give in his tender for so many cubic feet.

826. But does it say he shall tender at so much per cubic foot, and not at so much per ton?—Yes, it does.

827. Having read the first part of that advertisement, read the second part, beginning at "the samples?"—"The samples, dimensions and other particulars of the wrought stone may be seen at the office of Mr. Stuart, at the Oreston quarries, near Plymouth."

828. Is it not the custom to have a schedule, and was there not in this instance a schedule in the office of Mr. Stuart, which was there left to be read by the tenderers, and in which schedule it was directed that the tender should be made per cubic foot?—I have not the least doubt of it.

829. Did you see it?—No, I did not.

830. Does it fall within your knowledge that there was such a schedule?—I have not the least doubt of it; it is customary in all cases of that kind that there should be one.

831. How did the passage in the schedule that you refer to, run; in what terms was it couched?—Which?

832. The passage in the specification which was to be seen at the office of Mr. Stuart?—There was a sample of the stone they were to deliver, and I suppose every explanation would be given by Mr. Stuart.

833. Do you know in what terms this direction, as to the manner in which the tenderer was to put in his tender, was couched?—The tenders were couched in the usual way, except that in one instance one man offered it in tons, in the room of offering it according to this advertisement.

834. Are

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834. Are you not speaking of a document you never saw?—No.

835. Did you ever see these specifications and the directions how to prepare the tenders which were shown at Mr. Stuart's office to the tenderers?—No.

836. Was there such a schedule, for the guidance of those who tendered?—I have no doubt of it; I never saw it.

837. Now as you have no doubt in your own mind that it was in cubic feet the tender was to be made, and not per ton, was not Mr. Pearse's tender made by the ton?—Yes.

838. Was not that an irregular tender?—Yes, it was not according to the advertisement.

839. According to the instruction in Mr. Stuart's office, did it not present itself to your mind that that tender was irregular in form?—Yes.

840. Speaking from your experience in the office, as the tender was irregular in form, did you consider that as a tender it ought to be treated as admissible?—It must be admissible with me; its admissibility rested entirely with the Admiralty; I felt myself bound to transmit it.

841. Did you accompany the transmission of Mr. Pearse's tender, which you considered irregular in point of form, with any observation as to its irregularity?—No.

842. Did you offer to hand it back to Mr. Pearse, at the time, on account of its being irregular in form?—No.

843. Did you make any observation to Mr. Pearse, at the time, that it was irregular in form?—I do not recollect ever having seen Mr. Pearse.

844. But you have no doubt it was irregular?—Yes.

845. You say there is no doubt it was irregular; is there a single word in your advertisement which tells the parties, expressly, that they must tender at so much per foot?—Yes, here it is.

846. Read any passage in which those words occur, "that the tenderer is to tender at so much per cubic foot?"—It is expressed here in as plain words as can be.

847. Do you mean to say that by the words "any persons willing to supply and deliver about 30,000 feet of wrought limestone," is stating expressly to the parties that they are to tender at so much per cubic foot?—Yes.

Mr. *Edward Scott*, again called in; and further Examined.

Mr. *Edward Scott.*

848. WHAT day of the week was the 17th of February?—It was on a Tuesday.

849. On looking at your evidence, there appears to be some uncertainty as to the date of the day on which you saw Mr. Dawson in London; hearing that Tuesday was the day of the tender, can you say on what day of the month and week you left Plymouth to come to town?—I left Plymouth on the 19th, certainly.

850. By the mail?—Yes.

851. Does the mail start at six in the morning?—Seven.

852. At what time does the mail arrive in London?—Seven the next morning.

853. Was it on the day of your arriving in London, that you saw Mr. Dawson?—I think it was.

854. Try and charge your memory?—I can assure you so many afflictive circumstances have happened in my family, that it has almost wiped out all recollection of the circumstances; I think it was the same day.

855. You arrived in London on the morning of the 20th?—On the morning of the 20th.

856. About what time of the day was it that you saw Mr. Dawson?—About three o'clock.

857. When you really saw him?—When I really saw him.

858. Sir James Cockburn went with you, and was present at that interview?—Yes, he was.

859. Did the letter of the 18th of February go by the post?—I really cannot declare, whether I sent it by the post, or whether I brought it with me; my own impression is, I put it in the post office at Plymouth.

860. Then you are not sure whether this letter, bearing the date of the 18th, was put into the post, or was brought with you to London?—No.

861. You have some uncertainty about that, have you?—Yes.

862. Where was it written?—It was written at Plymouth.

863. Where?—At my office; at my house.

864. Was your brother present with you at the time?—No.

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865. Did you communicate to your brother the contents of that letter, which you say you wrote in your house on the 18th of February?—I never saw him afterwards.

866. What makes you doubt whether you sent the letter by the post, or brought it with you to London?—I cannot recollect; I tried last night if I could remember that circumstance with two or three others; and it is with the greatest difficulty I can bring myself to recollect that and other circumstances.

867. Do you still remain in doubt, whether it was sent by the post or brought with you?—Yes.

868. If you brought it with you, when was it sent in to the Admiralty?—In the morning, if I brought it with me; which I do not think I did; my own impression is, I put it in the post.

869. Did you deliver it yourself to Mr. Dawson?—Certainly not.

870. Did you give it to Sir James Cockburn?—I did not.

871. Did you send it to Sir James Cockburn?—I did not.

872. Did you send it, after your arrival in London, by the twopenny post?—I really cannot tell how the letter reached the Admiralty.

873. Did you not say that you were twice at the Admiralty on the 20th?—Yes.

874. The first time you were there, you did not see Mr. Dawson?—No.

875. Did you leave that letter at the Admiralty, when you went the first time?—I cannot recollect whether I put it in the post office, or not: my own impression is, I put it in the post office at Plymouth. There are two circumstances which I did not recollect yesterday; I was asked yesterday "if I had seen any person besides Sir James Cockburn and Mr. Dawson on that day, touching this matter;" I wish to say that, on my arrival in town (which I did not recollect yesterday), I called on Mr. James, of the Contract Office; I inquired of him, whether the tenders had been accepted.

876. Was that on the morning of the 20th?—Yes, the morning of my arrival; Mr. James told me that he had not seen them, and referred me to the Admiralty; I called then on Mr. Taylor, and asked Mr. Taylor if the contracts had been decided; for I then had some doubt about a fourth tender.

877. What do you mean about a fourth tender?—About making a fourth tender.

878. Whether you should or should not make a fourth tender?—Yes; Mr. Taylor, I think, said, if I wished to send another tender, I must do it immediately, and I ought not to lose any time.

879. Did you send another tender?—I did not, I destroyed it.

880. Has this been brought to your recollection by conversation with Mr. Taylor?—I never saw either of them.

881. You recollect seeing Mr. James, and seeing Mr. Taylor; and conversing about the tender; now the Committee ask you again—what do you say, one way or the other—was that letter sent by the post from Plymouth, or was it brought by yourself to London, and sent by you through somebody to, or delivered by you at, the Admiralty?—I should fancy the envelope would show that.

882. Answer the question; tax your memory?—I can give no other answer than I did before; my own impression is, I put it in the post office at Plymouth.

883. The Committee ask you whether, when you saw Mr. Dawson, you asked him, whether your letter of the 18th had been received?—I did; "my amended tender," I think, was the expression.

884. Then you did not use the term "the letter of the 18th?"—No, I think it was the "amended tender."

885. Were there three tenders of yours?—Yes.

886. Was not the second tender an "amended tender?"—I had not made use of that expression, in my correspondence.

887. Did you not put in two tenders to Captain Ross?—Yes, I recollect that I did now; but I did not perfectly recollect it yesterday.

888. Then do you think the only words you used were "amended tender?"—Yes, I think "amended tender;" it is very difficult to charge one's memory with little conversations of that kind.

889. How long before you left Plymouth to see Mr. Dawson, was it that you inquired what was the number of feet to a ton?—The very day that I tendered.

890. Before, or after you had made the tender?—Before.

891. Which tender do you speak of?—The first tender.

892. Before you made the first tender?—Yes.

893. Of whom did you inquire?—My foreman.

894. And

894. And no one else?—No.

895. What is your foreman's name?—John Evea.

896. What is his address?—At the quarries; Pomfret quarries; I might have asked him 10,000 times before.

897. When?—Before that; that was a part I wished to explain; immediately after I had purchased the quarries, believing no other quarry was able to produce those stones, and that whoever took the contract must of necessity come to me, I then entered into a calculation with him about it.

897*. If you had entered into a calculation with him about it so many thousand times before, how is it you gave the answer at first, saying, that you asked him the very day that you made the tender?—I did again, and I will tell you why I asked, because of Mr. Pearse's tender.

898. Had you heard of Mr. Pearse's tender at the time you asked him?—Yes.

899. About what o'clock was this?—I believe about ten o'clock in the morning.

900. Ten o'clock on the 17th?—Yes.

901. Then all that you told the Committee yesterday, of asking a great number of other quarrymen, and their answers, that information you have obtained lately?—I stated I had desired my foreman to go round to the different quarries to ascertain what quantity of limestone they could produce.

902. When was it you desired your foreman to do that?—The night before.

903. As to the memorandum you read yesterday, did that arise out of the directions given to your foreman on the 17th of February?—No.

904. The question is, when it was you inquired, what was the number of cubic feet per ton?—The first time I ever asked was, when we commenced the working the quarry.

905. Did you not say you asked it again on the day of the contract?—Yes.

906. You also gave information, from a paper memorandum in your hand, that inquiries had been made of different quarrymen as to the number of cubic feet per ton, and you said their answer was 12?—Yes, I did so state.

907. When was it you sent to make these inquiries of the different quarrymen as to the number of feet per ton?—On the 21st of August; this last August.

908. Had you been summoned to this Committee at that time?—I think it was from the papers I collected an idea I should be sent for.

909. Then what led you to think it necessary to make this general inquiry of the quarrymen, as to the number of feet per ton?—I remember I had received a letter from the chairman the evening before I made the inquiry.

910. Then having received a summons to attend this Committee, what rendered it necessary that you should then make this general inquiry as to the number of feet per ton?—To show it was the custom of the trade.

911. What in your idea rendered it necessary to show to this Committee it was the custom of the trade?—Because the statement made in the newspapers of 13 or 15 feet to the ton was completely fallacious.

912. Did you see any statement in the newspapers, telling the public that you had been to Mr. Dawson before the contract was made, and told him that it was 12 feet per ton?—No, certainly not.

913. Was there any thing in the newspapers as to the 12 or 15 feet per ton?—No, 7*d.* was mentioned, and I calculated on that.

914. Did you make that inquiry from your knowledge that you had stated to Mr. Dawson, that 12 feet per ton was the proper quantity?—No, certainly not; I will explain why I made the calculation, and why I thought it was necessary. Immediately the papers came down, we were arraigned for having done this thing and the other, in public opinion: it was said, "that we had taken the contract three farthings above Mr. Pearse's," so that I found it necessary to show that it was 12 feet to the ton; and I told every one in the neighbourhood of the circumstance, that I was intimate with.

915. Is Evea the name of your foreman who had the conversation with Pinch, the man in Pearse's employ, and ascertained from him, that 8*s.* 4*d.* per ton was the price at which Pearse was to tender?—Yes, he is the person who stated the conversation, that that was what he could afford to tender at.

916. When did Evea tell you that this conversation with Pinch took place?—It was either the same day, or two or three days before the contract did take place.

917. You are asked when the conversation took place between Evea and Pinch?—I do not know.

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918. You got the information from Evea, either the same day, or a day or two before the day of putting in the tenders?—Just so.

919. Did you not take an active part in the late election in favour of Mr. Dawson and Sir George Cockburn?—Not a very active part, I voted for Mr. Dawson; I did not join his Committee, and take such an active part as I did at Plymouth.

920. Has your son been appointed to a situation at Bermuda?—Yes.

921. By whose interest was he appointed; what political friend?—I do not know that I am bound to divulge that; I think that is a private transaction, and has nothing to do with this matter; I think that is rather too inquisitorial.

922. The Committee will not press you to answer the former question, to which you objected; but they will put to you another question, which you may answer or not as you please; was it through Mr. Dawson's interest, according to your belief, that your son obtained this appointment?—I think that has no reference whatever to the present question, and I do decline divulging any thing that has no reference to it.

923. Did you not observe, in the report of debate upon the petition presented by the chairman, that it was stated, that the estimate of the 7 *d.* per foot having been formed on an erroneous calculation of 15 feet per ton, was afterwards rectified by a more correct calculation of 13 feet to the ton?—Yes, such a remark was made by Lord Ashley.

924. Are you an alderman of Plymouth?—Yes.

925. And as an alderman of Plymouth, are you in the habit of taking a feeling and interest in the question, who are the representatives?—I think it necessary to state, that within the last two months only have I been an alderman; I was not an alderman at the time this contract was taken; nor was I, in fact, a common councilman; I was elected a common councilman during my absence from the town; and, two months ago, there was a strong contest for the alderman's gown, when I was elected by a great majority of the whole constituency, amounting to about 400.

926. When did you commence preparing limestone, and with what view?—In August or September, last year.

927. And with what view?—With the persuasion that, if I did not get the contract myself, whoever took the contract, would be very glad to take the stones from me; in fact, Mr. Johnson asked me that question early, before the tenders were given in; he had seen the stones on the road.

928. How long before?—I think he asked me the very morning of the tender.

929. What did he ask you?—Why I had prepared so many stones.

930. What did you reply to him?—Just the observation I have made now: whoever took the contract, would be very glad of the stones, if I did not get it.

931. Has Mr. Stuart, the superintendent of the Breakwater, any direct or indirect partnership or concern with you in your limestone business?—Not the slightest: I know it was so represented at the Admiralty, but he has not the slightest.

932. Had he any thing to do with the purchasing of the quarries?—No, he accompanied me to look at the quarries, to give me his idea of the value of them.

933. And did he give you the benefit of his opinion as to the value of the quarries to purchase?—Yes, he did.

934. Was he any party to the purchase?—Not the slightest, none.

935. Was he a party to the assignment of the quarries?—No.

936. Nor in the agreement to purchase?—No, he had nothing whatever to do with it, further than giving me his opinion.

937. You have been asked, why you took such pains to ascertain how many cubic feet there was in a ton?—Yes.

938. Were you aware that Mr. Pearse's tender was at per ton?—Yes.

939. And was it not very natural for you to wish to know, whether his tender or yours was the highest?—Yes.

940. And if there were 12 cubic feet in a ton, your calculation is, that yours was the lower tender?—Decidedly; when I stated yesterday that I had paid only a farthing per foot additional price for cutting the stone, I find I ought also to have stated that a halfpenny per foot extra was paid for raising the stone; that is since I agreed to take the contract.

941. Can you charge your memory to say, at what time of the day your second tender at Plymouth was put in; the first was at 9*d.*?—Yes.

942. At what time was the second, at 8¾ *d.*, put in?—It must have been before two o'clock.

943. Was

943. Was it before or after one o'clock?—It must have been before I left the yard. Mr. *Edward Scott.*

944. Where did you contrive to write it, before leaving the yard?—It was written at Plymouth, before I went to the yard; it is customary, on all occasions of taking contracts, for the persons who mean to tender, to take certain blank contract tenders with them, and to fill them up according to circumstances; and therefore it was I had little or no trouble in making it out. 26 August 1835.

945. Then you made out a second contract, without quitting the yard?—Yes.

946. Answer the question put to you before; was it before or after one o'clock that you put in the second?—I can scarcely tell at what hour I did leave the yard, I think before one; it was immediately after the discussion to which I alluded yesterday.

947. Can you tell the Committee at what time of the day on the 18th you wrote this letter of the 18th?—At night, in the evening, after my brother returned home; he lives in the country, and he leaves the counting-house at four o'clock, and he did not know I was gone to London.

948. Was that letter written at Plymouth entire, or was it written on the plan of leaving blanks to be filled up, as you say is the custom when tenders are made at the Dock-yard?—It was written entire; the wording differed from the others.

949. To whom did you deliver the second tender which you put in at the yard?—I think to one of the Commissioner's messengers.

950. What is his name?—I do not know his name.

951. You did not put it into the box?—No, the box had been carried in before.

Mr. *George Ledwell Taylor*, called in; and Examined.

952. WHAT are you?—Civil architect to the Navy. Mr. *G. L. Taylor.*

953. Have you brought with you the tenders that were made in February last for limestone for the Plymouth Breakwater?—I have several of them; I have all but that which was accepted, I believe.

[*Hands in the same.*]

954. Have you brought a tender of Mr. Johnson's?—No, Mr. James, of the Contract Office, has it.

955. Have you brought the letter of the 18th of February, from Mr. Scott to Mr. Dawson?—Yes, I believe I have; here it is.

[*Hands in the same.*]

Mr. *John James*, called in; and Examined.

956. HAVE you brought Mr. Johnson's tender for granite and limestone?—I have the tender here. Mr. *John James.*

[*The Witness produced it, and handed it in.*]

957. Have you any tenders put in by Messrs. Scott in February for granite and limestone?—I have not; I can explain what became of them, although I have not the possession of them. They were sent first from Plymouth to Whitehall; and when it was determined to accept the tenders, they were returned to Captain Superintendent Ross, as he could not have drawn the contract without being in possession of them.

Mr. *Edward Scott*'s Examination continued.

958. LOOK at this letter—[*showing the Witness's original Letter of the 18th of February* 1835], and the direction of it; can you now say, whether you put it in the post at Plymouth, or brought it up to London with you?—I must have brought it to London. Mr. *Edward Scott.*

959. What makes you say you must have brought it to London, now that you look at it?—Because I do not see any post mark there.

960. Being now satisfied, from seeing the letter, that you brought it with you to London, charge your recollection, and tell the Committee, by what means that letter found its way to the Admiralty?—I think I must have sent it up by one of the messengers.

961. What messengers?—At the Admiralty.

962. When?—On the morning of my arrival.

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963. At the same time you sent up your note to Mr. Dawson to see him?—I think before that; indeed I assure the Committee, I have no distinct recollection of the circumstance at all now; I only know this, and I will pledge my honour, I never saw Mr. Dawson, until after that tender had been received. If Mr. Taylor, or if Mr. James could have answered the question to me, whether the tender had arrived in time, I should not have troubled Mr. Dawson at all.

964. What tender did you mean as "arriving in time," in speaking to Mr. James and Mr. Taylor; when you now tell the Committee that that letter was not forwarded by the post, but sent up by one of the messengers to the Admiralty?—I stated, I have no distinct recollection of the circumstance. I must have sent it, I suppose, to the Admiralty; but how it went, I cannot tell.

965. Where did you see Mr. Taylor and Mr. James?—I saw Mr. James at Somerset House.

966. Where Mr. Taylor?—At the Admiralty.

967. Did you see those two gentlemen, or either of them, before that letter was sent to the Admiralty?—I think subsequently, I think it was while I was waiting.

968. Did you go to the Admiralty, to send in that letter, before you went to Somerset House to see Mr. James?—Yes, I think so; I had waited a considerable time, and my impression was, as Mr. Dawson did not come out, that the tenders had been sent to the Contract Office; and therefore it was I went to Mr. James; I fancied that all the tenders must be there.

969. When you made of Mr. James the inquiry, whether your amended tender (meaning thereby the third for 60,000 feet) had arrived in time, did you mean to ask, whether by delivering it yourself that morning at the Admiralty, it would be considered as having arrived in time?—Yes, there was a doubt in my mind whether the tender had arrived, and would be received.

970. What do you mean by "having arrived?"—I mean had reached the Board, had been placed before the Board; there was a doubt about it in my mind.

971. Then you did mean, by making that inquiry of Mr. James, to ask whether by delivering the tender that morning yourself at the Admiralty, you would be considered as having delivered it in time?—Not if the Board had determined on the other.

972. But did you not mean to ask of Mr. James, whether your delivery of it that morning at the Admiralty would be considered a delivery within the proper time?—I think so; that is my impression at present.

973. Did you inform Mr. James or Mr. Taylor, that you had yourself that morning, the morning of the 20th, sent up a new tender?—I really cannot tell.

974. You went for the purpose of asking whether it was in time?—Yes.

975. In asking that question, time being the object of your inquiry, did you not say, "I this very morning sent a tender to the Admiralty, and is that in time?"—I think so; I think that must have been the fact.

976. You went to Mr. James to ask whether your tender was in time; you have said on that very morning you had sent these tenders to the Admiralty?—Yes.

977. Did you ask Mr. James whether the tender which you had delivered that morning of the 20th, was in time or not?—I do not remember the words I used; but the impression on my mind is, that I asked him, if that tender had been in time?—I have here the form of tender and specification which were exhibited at Mr. Stuart's office, at Oreston; and these I beg to hand in.

[*Handing in the same.*]

Mr. *William Johnson,* called in; and Examined.

Mr. *W. Johnson.*

978. ARE you a stone merchant?—I was, but I have been obliged to leave business from ill health.

979. Did you make a tender for limestone for the Breakwater on the 18th February?—I dictated the letters. As soon as my brother returned from Plymouth, he gave me a copy of the letter which was sent to the Admiralty.

980. Did you attend at Plymouth?—No, it was Mr. John Johnson's tender. I merely carried on the corresponding part of his business.

981. Do you live in Plymouth?—I live in Hampshire.

982. Is it you or your brother that knows most respecting all that relates to the tender for the limestone and granite?—As far as the practical part of the business goes in supplying limestone, and information as respects that, my brother knows more about it than I do; but as I have generally been in the habit of conducting the correspondence,

correspondence, I presume I know as much as my brother, and I have the papers in my possession.

983. Were you at Plymouth Dock-yard on the 17th of February last?—I was not.

984. What part of the transaction have you any knowledge of?—I might simply state how I came here. I happened to come to town to consult my medical man a week ago. I saw in the papers something said respecting the Breakwater; in reading this over, I felt some interest with respect to it, although I was unconnected with my brother, as far as business was concerned. I saw the Chairman, and I thought I should speak to him, because he had said something respecting it.

985. The question is, what part of the transaction relating to the contract for limestone for the Breakwater you are conversant with?—I am acquainted with the price that was tendered for the limestone and the granite.

986. Merely the formal part?—Yes. I did not consider I should be called as a witness; but finding that some answers had fallen in reply to the Chairman, which I conceived were not correct, I stated my objections to them. We were tenderers, and as we tendered at lower prices than Mr. Scott had tendered, we conceived we had been unfairly treated; and we made a representation of it to the Board, which was unattended to.

987. Do you know from the correspondence that passed through your hands, that Messrs. Johnson tendered for the limestone at 8*d.*?—Yes.

988. Is that—[*showing the Witness a paper*]—your correspondence with the Admiralty, or your brother's?—It is my brother's signature, and a clerk's handwriting.

989. Does your brother know of every thing that passed at Plymouth regarding his tender?—Yes.

990. Did your brother come to London almost immediately after?—Yes.

991. What day did your brother arrive in town?—I do not know.

992. Tuesday the 17th was the day upon which the tenders were delivered?—Yes.

993. Did your brother come to town either the following day or the day after?—He came shortly after; I should say either the following day or the day after.

994. Did your brother write a letter to the Admiralty complaining of the contract for limestone having been given to Scott, his tender being higher, as your brother conceived, than his own tender?—Yes.

995. How do you know that?—Because I was present at the time, while the clerk wrote it; and I believe I dictated that letter.

996. Why do you say your brother wrote it?—His signature is to it.

997. You dictated the letter, your clerk wrote it, and your brother signed it?—Yes.

998. As nearly as you can recollect, how long after your brother arrived in town was it, that this protest was sent in to the Admiralty?—I can give the date of it.

999. Have you a copy of the letter?—I have a rough draft of it.

1000. Look at that letter of the 10th of April 1835, and see if that is the protest itself?—[*handing the Letter.*]—Yes, it is; it was a representation of the circumstance.

1001. Had you made any representations previous to the 10th of April?—I will refer to the dates; I do not see that we did.

1002. At what time were you informed that your tender for granite had been accepted?—On the 7th of March.

1003. Have you a copy of the letter you received?—Yes, I have. I have, first, a letter of the 4th of March from Captain Ross.

[*Witness hands in the same.*]

The next letter is from Captain Ross, dated 7th March.—[*Witness hands in the same*]—appointing a day for him to attend and execute the contract and bond. That is addressed to my brother at the granite works at Plymouth, as was the other, but forwarded in a parcel to town, my brother being in town.

1004. What was done by you or your brother, in consequence of that letter of the 7th of March?—There is a letter of the 14th of March, of the same character as the other, from Captain Ross, calling on us to execute the contract for the granite. Then on the 18th of March my brother received this letter from the Board of Admiralty. [*Witness hands in the same.*]

Gentlemen, Admiralty, 18 March 1835.

The superintendent of the Breakwater having reported to my Lords Commissioners of the Admiralty, that no preparations have yet been made by you for the execution of your

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contract for granite for that work, a portion of which is wanted, I am commanded by their Lordships to acquaint you, that unless the contract is signed within three days, they will consider it as voided.

I am, Gentlemen,

Messrs. J. & W. Johnson, Grosvenor Wharf. Your most humble servant, *G. Dawson.*

1005. What did your brother and you do in consequence of that?—On the 20th March he wote a letter to the Board, directed to Mr. Dawson.

[*Witness hands in the same.*]

Sir, Grosvenor Wharf, March 20, 1835.

I HAVE had the honour to receive your letter of the 18th instant, stating that unless the contract for granite for the Plymouth Breakwater is signed within three days, the Lords Commissioners of the Admiralty will consider it as voided.

In reply, I beg to inform you that my unavoidable absence from Plymouth prevents my signing the contract there at present; but should it be their lordships' pleasure to have it executed forthwith, I am ready to do so here at any time appointed.

The report of the superintendent that no preparations have yet been made by me for the execution of the contract is, I am happy to add, incorrect; for I have on my wharf an abundant quantity of granite, which is the more fortunate, since the division of the contract for limestone and granite has caused a strike among the workmen in Dartmoor, which has suspended the whole of my works there.

I have the honour to be, &c.

G. R. Dawson, Admiralty. *J. Johnson.*

We felt aggrieved when we found the contract was separated. The competition was so great, as caused the men to strike.

1006. There was a strike, was there?—Yes, there was, at the granite quarries.

1007. Was there also at your limestone quarries?—Yes, and many of our men went from our limestone quarries; it was a complete change of hands.

1008. What took place in consequence of that letter of yours?—We had a letter of the 20th of March from the Admiralty, signed by Mr. Dawson—[*Witness hands in the same*]—desiring us to complete the contract for granite immediately. I said, immediately on receiving this letter. "I think now you have nothing further to say to the Board; for they very likely may consider it very officious if you go further, for they seem to have made up their minds upon the subject."

1009. What did you and your brother do?—It appears, although the contract was not signed, finding they did require granite for the work, my brother allowed the superintendent of the Plymouth Breakwater to take it at his pleasure, because there should be no interruption; and here is a letter, dated the 6th of April, signed by the Commissioner of the Dock-yard, Captain Ross.

[*Witness hands in the same.*]

Sir, Plymouth-yard, 6 April 1835.

MR. STUART having represented to me that deliveries of granite have been made by you without the invoices required by the contract, I have to request that you will immediately furnish him with the required invoices, notwithstanding the date of the contract cannot be ascertained, until directions are received from the Admiralty; and also that you will continue to do so in all further deliveries.

I am, Sir, your most obedient servant,

John Johnson, Esq. Granite Works, Plymouth. *C. B. H. Ross.*

1009*. Is this the original letter of remonstrance of the 10th of April that you addressed to Mr. Dawson?—Yes, it is.

[*The same was produced, and read.*]

Sir, Grosvenor Wharf, 10 April 1835

IT having been communicated to me by Mr. Innes at the Admiralty, that, it having been alleged I had made some alterations in the contract prepared for my signature for the supply of granite for the Plymouth Breakwater, it is the intention of their lordships to re-advertise for tenders, I deem it necessary to deny my having made any alterations, and to state the fact as it occurred.

Upon attending at the office for the purpose of executing the contract, I perceived on reading it that it contained matter irrelevant to the tender which had been accepted, and upon pointing it out to Mr. James, he erased the superfluous part.

No alteration whatever was made by me, though I suggested that, as the contract provided that the granite should be delivered at my wharf, a provision should be made for its prompt removal, to prevent an inconvenient accumulation.

I humbly presume that, under these circumstances, there does not exist the slightest pretext for re-advertising for tenders, or cancelling mine, which their lordships have already accepted. Nevertheless, if such should be the will of their lordships, I readily bow to it.

With

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With respect to the superfluous part of the contract stated above to have been erased by Mr. James, I would beg to invite to it the most serious consideration of their lordships.

It related to the limestone contract, of the real circumstances of which I am confident that their lordships are not aware.

For the limestone, as well as the granite, my tender was the lowest; my lowest tender has been rejected, and there has been accepted the higher tender of Mr. Scott, with whom it is generally known at Plymouth that Mr. Stuart, the superintendent himself, has recently been associated in the purchase of the quarries destined to furnish the stone.

I would crave their lordships to ascertain, from official sources, who really made the lowest tender for the limestone.

I have the honour to be, Sir,

The Right hon. G. R. Dawson. Your very humble servant,

John Johnson.

1010. What was the next letter in the course of this correspondence?—That correspondence ceased, and another tender was made for granite, and it was advertised.

1011. And you lost the contract for the granite?—Yes, we lost the contracts for the granite likewise.

1012. You say, in the letter to the Admiralty, "it is very well known Mr. Stuart has been associated with Mr. Scott in the purchase of these quarries;" do you now repeat that assertion?—Yes, and I believe witnesses can be found who were present when Mr. Stuart (before the Board advertised for a tender) was in Mr. Scott's new quarry—Mr. Scott was a brewer; Mr. Stuart was there directing the men—pointing out *this* will do for the Breakwater purpose, and *that* will not do.

1013. And from having seen Mr. Stuart in Mr. Scott's quarries, stating "that this stone will do for the Breakwater, and that will not do," you infer, and you re-assert, that Mr. Stuart has a share in the profits of those quarries?—We believe it is so, for this reason—that it was known at Plymouth that he was present at the negotiation of these quarries; he valued them, and did this, that and the other; and I have heard that, previously to this, he was a partner in Mr. Scott's brewery—that is, he had some idle capital in it.

1014. Do you, because he was on the spot, and gave an opinion as to the value of those quarries, from that infer and re-assert that he had a share in the profit of those quarries?—Yes, he being on the spot, and conducting these works for Mr. Scott; whether it is the fair inference I do not know: it is what I did infer.

1015. You re-assert what you stated in that letter?—Yes, and I should a hundred times, so confident of it was I at the time.

1016. What is it do you believe these witnesses could prove? could they prove more than this: that, before the Board advertised for a tender, they saw Mr. Stuart in company with Mr. Scott at the quarry, pointing out what stone, according to its quality, would do, and what would not—is that all the witnesses could prove?—I do not know.

1017. As far as you are informed, is that all that they could prove?—As far as I know, that is all they can prove.

1018. Then these witnesses of whom you have spoken, can prove no more, than that they saw Mr. Stuart in the quarries, giving an opinion as to the value and quality of the stone?—I cannot say they can prove no more, because I do not know what information they have had.

1019. Can you state the date of Mr. Stuart's being at the quarries?—My brother will be able to tell you.

1020. Are you or is your brother best informed on the subject matter in dispute, referred to arbitration, between your firm and the Admiralty, with respect to the late contract for the Breakwater?—I believe I had the conduct of all that, though my brother was at all times present; but I may be said to know most of it.

1021. There was a dispute between your firm and the Government on the subject of the late contract for the Breakwater?—Yes.

1022. Was that referred to arbitration?—Yes.

1023. Was the arbitration pending on the 17th of February last, or was it then settled?—I conceive that it was settled just previous; it might have been a day or two after.

1024. You had reason to believe the Admiralty were dissatisfied with your conduct as regarded a former contract?—Yes, I know as a fact they were prejudiced against us.

1025. You know the late Board of Admiralty expressed great dissatisfaction with your conduct?—No, I do not. Out of all the official correspondence (and there is a very large volume of it) I do not think there will be found an imputation

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of any kind against myself or my brother; on the contrary, there are letters stating they were perfectly satisfied.

1026. Whether it was dissatisfaction on good ground, or whether it was prejudice, do you not know that there were very great doubts existing, as to your conduct, in the minds of the last Board of Admiralty?—I do not know any thing about their minds, further than the official correspondence goes.

1027. Doubts respecting the manner of your fulfilling your contract, with respect to the Breakwater?—I never heard of them.

1028. You have no correspondence in your office to show, and you never heard, that the late Board of Admiralty had expressed dissatisfaction with your conduct?—Decidedly not; on the contrary, we were asking for justice, but they never complained of us at all. They cannot say this was wrong, or the other was of bad quality.

1029. Did the Board of Admiralty under my Lord Auckland ever express dissatisfaction?—Never, that we are aware.

1030. Did the Board of Admiralty under Sir James Graham ever express dissatisfaction?—No; on the contrary, I heard from a gentleman, before he left this country, that Sir James Graham pledged himself honestly to see that our accounts were fairly settled; and for the purpose of satisfying our minds, he said, "we might rest on velvet as to the result," using those words.

1031. Then you do not know that the last Board of Admiralty, or either of the two preceding ones, ever felt the slightest dissatisfaction at your conduct respecting the Breakwater?—I have a letter here which expresses something like dissatisfaction, but it is not an official letter.

1032. From whom is it, and to whom?—From Mr. Dawson to Lord Morley.

1033. What is the date of it?—It is the 18th of May last.

1034. Read it?—

Dear Lord Morley, 16, Upper Grosvenor-street, May 18th.

I have just received your note, and I do not think that Mr. Johnson's report to you alters the statement. He says that his tender for the limestone was 8*d.*, and that Mr. Scott exceeded that price, and that he saw the tender at Somerset House. I stated to you that Mr. Scott made two tenders, one at 8$\frac{1}{2}$*d.* the other an amended one at 8*d.*; it is possible Mr. Johnson might have seen the former, but I do not think he saw the latter; for I had sent to Somerset House for the papers of the last contract the very day I desired Mr. Johnson to go there to sign his own contract for the granite. We had had so much trouble with him, that I recollect the circumstance perfectly well; and I was in the very act of writing to double the quantity both of limestone and granite to be supplied, when he called at the Admiralty; he could not therefore have seen Mr. Scott's contract; and the best proof that he is wrong is, that the limestone is now supplied at 8*d.* He must recollect also that his offers differed from the others, he engaging to deposit the stone only at Catwater, the others at the Breakwater; so that in fact his offer might appear the lowest, when, if the expense of conveying it to the Breakwater be added, it was the highest. I myself had not the least suspicion of fraud, nor do I think it was attempted, but I must at the same time say, that Mr. Johnson's extraordinary low offer for granite, so much below that of the others as to make it appear wonderful how he could supply it, and his subsequent delays and shiftings in completing his contract, begot a suspicion not favourable to him, and which ultimately ended in annulling his contract. Whether he offered on a second advertisement to supply the granite at the same price, I know not; but I am quite sure, if the old Board had remained in office, his offer would not have been accepted. The papers at the Admiralty are clear and decisive of the fairness of the transaction; the *ex parte* statements of contracting parties must always be viewed with suspicion. Mr. Johnson will assert one thing, Mr. Scott another; they will contradict each other, and a dispute between rival parties ensue, which will end, as all such disputes usually end, in leaving the matter just where it commenced. I am sure the papers are clear and explicit, and have not the slightest appearance of fraud.

Believe me, yours, very truly,

Geo. R. Dawson.

P.S. I ought to add, if I recollect rightly, that Mr. Scott calculated his mode of ascertaining the quantity differently from Mr. Johnson; he, by his mode, giving more to the ton than Mr. Johnson did, which made it necessary to reduce both to equal quantities, before a comparative calculation of price could be ascertained, and that the result was in favour of Mr. Scott.

To this my brother replied in the following letter to Earl Morley:

My Lord, Grosvenor-street, May 20, 1835.

I beg leave to return to your Lordship the enclosed letters, and at the same to transmit a statement of the actual circumstances of the matters therein referred to, with which it appears from information I have received, Mr. Dawson has not been furnished.

My tender for limestone delivered at a wharf in Catwater was at 8*d.* per cube foot, and for granite 1*s.* 6*d.* Mr. Scott is now receiving at the rate of 8$\frac{3}{4}$*d.* per cube foot for limestone delivered at a wharf in Catwater. It is quite evident that his price cannot include

delivery

delivery at the Breakwater, as I saw the Government vessels loading the stone from his quays, when I was last at Plymouth. I assure your Lordship that I do not entertain the slightest wish to deprive Mr. Scott of his limestone contract, but I confess that I am anxious to show to His Majesty's Government that the delay that took place in the signing of the granite contract was not at all influenced by their preference of Mr. Scott's tender for limestone, although the higher of the two. That I did not "*refuse to sign the contract,*" as stated by the Board, will be fully apparent when it is known that I had actually supplied a portion of the granite. I naturally objected to such parts of the specification as contained conditions irrelevant to the granite contract, and having relation only to that for limestone, and I desired they might be expunged before I affixed my signature.

I cannot forbear remarking upon the mysterious conduct of the Board in causing a division of the contract for which one tender only was required by advertisement. The general usage in all such cases is to money out the different articles, and although it may happen that one particular may bear a higher price than the same article in the tender of another party, that tender which is lowest *in the gross* is invariably accepted.

I have the honour, &c.

J. Johnson.

1035. What does that latter paragraph refer to, as to the mode of calculating?—Sometimes limestone is calculated at so many cubic feet to a ton; by agreement it may be calculated at something more.

1036. Did you agree, under your former contract, to deliver the limestone at so much per ton, or so much per cubic foot?—I do not know what the contract for limestone was; it was in 1825 we had a contract for granite, and that was at per cubic foot.

1037. You cannot speak as to the limestone?—No; I cannot as to that; I know there is a question as to the limestone.

1038. In point of fact, according to the custom of the trade, how many cubic feet go to a ton?—I do not know.

1039. Respecting your former contract, and the matter which was submitted to Colonel Fanshawe, was there any dissatisfaction expressed by either of the three Boards of Admiralty, under Lord Auckland, Sir James Graham, or Lord de Grey, at your conduct?—I have not the slightest recollection of any official complaint having been made against us.

1040. Is it customary, in your mode of transacting business, that you should dictate a letter, the secretary should write it, and your brother should sign it?—Not at all times; but in this case of the Breakwater I commenced it, and so I pursued it.

1041. Had you any knowledge that it was intended to present a petition to the House of Commons relating to the limestone contract?—Not the slightest; I was not aware of it, until I was reading it in the newspaper; I arrived in town the evening previous.

1042. You knew nothing of it, until you saw the notification in the newspaper?—Not the slightest; it was because words were used, "the Admiralty had been cheated," that I interfered; it was not because the cap fitted.

1043. You have been in the habit of sending in tenders for contracts; have you experience in such matters?—Yes.

1044. Read this advertisement of the 4th of February, and say, whether under the words in which it is couched, you would have considered a tender made at so much per ton, and not per cubic foot, admissible?—I should not have tendered in that way, and therefore I could not have thought it admissible; I might have done it by ton by mistake.

1045. You would have considered a tender per ton as irregular?—I should not have tendered by the ton, unless I had forgotten myself. Sometimes we sell limestone by the ton, and sometimes by the foot; and if I was hurried, as I unfortunately am now, I might commit such a mistake.

1046. Would you have considered such a tender as irregular?—Certainly, I should; if it had been shown to me, I should have stated it was not regular.

1047. Do you mean, if a man says, "I offer to supply 30,000 cubic feet at so much per ton," it would be irregular?—Yes, because I should have some doubt as to what his price would be.

1048. Look at that paper, which is the tender which was made at the Dock-yard: is it signed by your brother?—Yes.

1049. In whose handwriting is the body?—One of the clerks at Plymouth.

1050. The figures are not in the same handwriting?—They are not, and there are other words that are not.

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1051. Do you know in whose handwriting those figures and other words are?—No.

1052. When did you first hear that not 30,000, but 60,000 cubic feet of limestone would be wanted?—That I do not recollect; I have heard it, but I cannot say when.

1053. Did your brother, on his return from Plymouth, know it?—I do not recollect it; he might have stated it.

1054. Have you been at Plymouth?—Some long time since.

Mr. *George Ledwell Taylor*, again called in; and further Examined.

Mr. *G. L. Taylor.*

1055. WERE certain tenders for limestone and granite for the Plymouth Breakwater referred to you, to report which was the lowest?—Yes.

1056. When were they so referred to you?—On the 19th of February.

1057. When did you report on them?—The same morning, within half an hour: they were referred to me on the 19th, and my report is on the 19th; I made the report on the 19th, but an abstract was delivered in on the 20th. My report on the 19th is, "Messrs. Johnson's is by far the most reasonable offer for granite, but he has only filled in the items 'as delivered at a convenient wharf in Catwater,' and has struck out of his offer 'or upon the Breakwater.' Silas Pearse's offer for limestone is the lowest, namely, 8*s.* 4*d.* per ton." In red ink I have said, "The abstract is preparing."

1058. In stating Pearse's was the lowest, did you make any calculation as to how much it would amount to per cubic foot, in order to compare it with the other offers?—Yes, I reduced it to feet.

1059. What was the result?—About 7*d.* I said.

1060. There are two observations upon it; one is in the abstract of the tenders, in which it is said, "Pearse's is 8*s.* 4*d.* per ton, about 7*d.* per cubic foot;" the other is in the report, "Silas Pearse's offer for limestone is the lowest; viz. 8*s.* 4*d.* per ton;" one was made on the 19th you say, and the other on the 20th?—Yes.

1061. When you reported in your abstract that the offer of 8*s.* 4*d.* per ton was about 7*d.* per cubic foot, how many feet did you take per ton?—Between 14 or 15.

1062. Have you been to Plymouth since you made that report?—Yes, I have.

1063. Are you able to state, taking the blocks of limestone dressed as they are required to be in pursuance of the contract entered into by Scott, that is, in their wrought state as delivered, and then fairly measuring them, how many feet will go to the ton?—No, I inquired at the wharf, and they told me 13; but I have no positive knowledge of that.

1064. At what wharf did you inquire?—I went to Mr. Scott's; I went to the Breakwater quarries, and in passing through, I inquired.

1065. Who gave you that information?—Mr. Scott's foreman.

1066. Do you know his name?—No, I asked it as a matter of curiosity; I have not had an opportunity since of verifying that accurately.

1067. What is the common calculation?—The average I have found from every body is 14; I have asked Mackintosh, and Mr. Miller, my assistant.

1068. What description of limestone did they refer to?—The limestone at Plymouth.

1069. Did you make inquiries at Plymouth of any person there, or at any of the quarries you visited?—No other but that one; that was by mere accident, from seeing a block of the stone.

1070. Then they told you 13 at Mr. Scott's quarry?—Yes.

1071. Who is Mr. Mackintosh?—He is a contractor at Plymouth, and one of the tenderers; I found 14 feet to be the general opinion.

1072. State, according as you take, first, 13, and secondly, 14 feet to the ton, what price per cubic foot 8*s.* 4*d.* per ton would amount to?—At 15 feet is about 6½*d.*; at 14 feet to the ton it is about 7*d.*; at 13 feet it is about 7½*d.*; at 12 feet it is about 8*d.* and a third.

1073. Now, at the time that these tenders were referred to you by the Board of Admiralty, was it stated by you, as any objection to Pearse's tender, that it was at so much per ton, and not at so much per foot?—I did not give it a thought.

1074. It did not appear to you, in going over the tenders, that it was objectionable?—No, I did not consider I had any thing to do with that; I thought it my duty to bring it into feet, to compare it with the others.

1075. Read over carefully the advertisement of the 4th of February?—I have.

1076. Do you think that a person tendering will have fairly complied with the conditions required for the tender, if he makes a tender at so much per ton for the

30,000 cubic feet?—I do not think I could answer that, without seeing the specification, on which he was to make the tender.

1077. Read the specification and schedule?—[*They were handed to the Witness.*] —In the schedule it is said, that it is to be at per cubic foot.

1078. Were those schedules under your consideration, at the time that you considered your report to the Admiralty?—The schedule was not sent up with the papers; it therefore made it a difficult matter for me to draw up a report.

1079. You did not make the objection?—No; this schedule not being sent up, I had great difficulty in ascertaining the different items.

1080. Read the part of the schedule which says, it is to be tendered for at per foot?—" Limestone for casing the south slope top and north slope of part of the west arm, similar in thickness to those already set in the finished work, not to be less than three feet long, and from four to five feet in depth of bed, and to be dressed according to specimen marked G, delivered at a convenient wharf in Catwater, so that vessels may take them on board with their own gear, at per cubic foot."

1081. Read the passage beginning " all the granite and limestone?"—" All the granite and limestone are to be measured, either on their delivery on the Breakwater, or when shipped or re-shipped, at the expense of the Crown, from the wharf or wharfs in Catwater, as the case may be; but any stones, either granite or limestone, found deficient in quality, dimensions or workmanship, are to be deducted from the measurement, and the contractor must remove the same; and if not removed or taken away within eight days, the same is to be used in the rough work, and no allowance made to the contractor in any shape whatever. All the different descriptions of granite and limestone are to be measured and paid for only according to their net cubical contents, when worked to the several required forms, without any allowance whatever for waste, dovetailed work, or any thing else; and in no case (except when conveyed by the Government) is the stone to be considered as received, until safely landed on the Breakwater."

1082. What is the form of the tender?—The form of the tender is, " I hereby engage to supply and deliver at the different periods mentioned in the specification, or at such other times as demanded by the superintendent, either upon the Breakwater in Plymouth Sound, or at a convenient wharf in Catwater, Plymouth, about 8,000 cubic feet of wrought granite; and at the said wharf or wharfs in Catwater, 30,000 cubic feet of wrought limestone, in all respects according to the samples, dimensions, specification and conditions exhibited at the Oreston office and quarry, at the following prices, viz.; 1st, granite, dovetailed bonding stones, delivered at the Breakwater, at per cubic foot; 2d, granite, dovetailed as above, delivered in Catwater at per cubic foot; 3d, granite mould stones, delivered at the Breakwater, at per cubic foot; 4th, granite mould stones, delivered in Catwater, at per cubic foot; 5th, limestone, for casing the south slope, at per cubic foot; and I beg leave to offer, if required, Mr. ———, of ———, as security for the due performance of the agreement."

1083. If this form of tender and specification had been laid before you with the advertisement, what should you have reported, as you apprehend, on the subject of Mr. Pearse's tender?—I should have remarked " that the tender was not delivered in according to the specified form;" but still I should have done what I have done, reduced it to feet, and the Board would have to form their decision, as to what would be the result.

1084. You say you would have considered it your duty to have calculated Mr. Pearse's offer, with a view to a comparison with the others; but should you have conceived that tender of his irregular?—Certainly.

1085. Should you have considered it inadmissible?—It would not be for me to determine that; that would be for the Board: if I had been asked my opinion, I should have said so, unless the party was at hand, that they could call him in.

1086. Upon the report there is written, " Mr. Scott's offer for limestone, in his letter, February the 18th, is the lowest; he offers it at 8 *d.*; send to Somerset House:" in whose handwriting is that?—In Mr. Dawson's.

1087. Upon the abstract is written, " See amended contract, 18th February," in whose handwriting is that?—I should say that is Mr. Dawson's.

1088. When did you receive back this report, with the words in Mr. Dawson's handwriting written upon it?—Not at all, I had no more to do with it: it then went to Plymouth; I never saw it afterwards, until lately.

1089. Did you at any time see that which is called the amended tender of the 18th of February?—Yes, it is among those papers.

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1090. Did you about that time?—No, only lately.

1091. Was it submitted to you at the same time with the original tenders?—I am not certain.

1092. Were the original tenders sent to you on the 19th of February?—Yes.

1093. Was there, among the original tenders sent to you on the 19th of February, Mr. Scott's letter of the 18th?—No, not at that time.

1094. When did you first see that letter of the 18th of February?—It might have been at the latter end of the Board, that day.

1095. When did you first see the letter dated the 18th?—I cannot tell.

1096. The Committee understand that Mr. Scott waited on you on the morning of the 20th—did he?—Mr. Scott came to me, I do not recollect what day, to ask questions, and I declined answering them.

1097. Had you seen that letter of Mr. Scott's, before he came to you to ask the questions?—I cannot tell, indeed; my impression is, the letter of Mr. Scott was handed in at the end of the Board day, and it was left to the Board to determine, whether it should be taken among the tenders.

1098. When was the Board day?—On the 18th of February, and that report ought to be marked the 19th.

1099. Is it not clear, from what you have stated, that you did not receive the tenders until the 19th of February?—I must now state, from what I see, that I did not receive the tenders until the 20th; and the Board day was on that day, Friday.

1100. The first time you got the tenders, was on the morning of the Board day, Friday, the 20th?—Yes.

1101. On what time on Friday morning were those tenders put into your hand?—I should say about a quarter past eleven.

1102. At what time did you make out the return, and report to the Board?—Within an hour.

1103. At what hour does the Board sit?—The Board generally calls me in about one o'clock, or half past one.

1104. Did you receive those tenders on the morning of the 20th, before you had seen Mr. Scott?—Decidedly.

1105. How long after you had received those tenders, did Mr. Scott come to you?—I cannot tell.

1106. Was it before you had made your report?—I am not certain.

1107. Was it the same day that you had received the papers?—I cannot tell; I paid very little attention to it. Mr. James can tell you, as he sent him to me. I thought he had no business to come to me, and I was rather short with him.

1108. Can you charge your memory, so as to say, whether at the time Mr. Scott came to you, you had seen his letter of the 18th of February?—I do not think I had.

1109. Who gave you that letter of the 18th of February, the first time you saw it?—I can hardly tell how I had it; it was most likely brought down by the messenger; any thing relating to my department is brought down to my room.

1110. There is no mention of Mr. Scott's offer of 8*d.* in your abstract or report, is there?—No; it had not been received by me then. My impression is, that it came to me, so that I took it up in my hand the last thing on that Board day, and handed it to Mr. Dawson for the Board to decide, whether it would be receivable; and that it arrived about half-past one.

1111. The letter purports to be an amended tender, and was clearly not sent up to you with the original tenders?—Certainly not.

1112. Does that particular circumstance enable you, on recollection, to say at what time this "amended tender" came into your hands?—No; I cannot state positively.

1113. Can you state whether it was the same day that Mr. Scott called on you; on the 20th?—No; I can state he did not give me the letter.

1114. Was it on the Board day that Mr. Scott called on you?—I think it must have been; because I am only at the Admiralty on a Board day.

1115. Where did Mr. Scott see you?—At the Admiralty, in a room I generally sit in there, on Board days. I am there when the Board sits.

1116. What did Mr. Scott ask you, when he came?—He began by asking me some questions about the tenders of the Breakwater, and I declined to give him any answer whatever.

1117. Can

1117. Can you charge your memory as to the questions?—No; I did not let it take possession of my mind at all.

1118. Did you consider it improper in him to put those questions?—Yes, I did.

1119. Can you charge your memory to say at what time of the day he came?—Yes; I should say, from my recollection, it would be about half-past two in the day; I think it was latish, or about two o'clock.

1120. Did he mention to you, at that time, how many tenders he had put in?—No.

1121. Did he ask you whether his tender was the lowest?—I do not think he did.

1122. Did he ask you whether you had seen a letter of the 18th?—No, I did not allow him to ask any question beyond the introductory one. I said I had nothing to do with it; I had done my duty, and I could not answer any question.

1123. Did he tell you whether he had seen Mr. Dawson at that time?—No.

1124. Were you previously acquainted with him?—I never saw him in my life before.

1125. How long did your interview with him last?—Not one minute; so little did I remark him, that, though he is now in the other room, I did not know him again.

1126. Did he come with any introduction?—No; he said he had been to Mr. James, at Somerset House; and that Mr. James told him, I was the most likely person for him to get information from.

1127. You cannot say from whom, but that from some one, in the course of the 20th, you received this letter of the 18th?—I would not declare that.

1128. Can you state whether any purpose was mentioned for which the letter was put into your hand?—Letters are in the habit of being brought down by the messengers into my room.

1129. Is there any minute made on that letter of the 18th?—No, there is not.

1130. If that letter did come into your hand, can you state for what official purpose it was sent to you?—All letters come to me.

1131. Was that letter referred to you officially?—No.

1132. Did you make any report on it?—No.

1133. Were you asked by Mr. Dawson, or by any other person, before the contract was made, what number of cubic feet you had taken to the ton?—No.

1134. No official inquiry was made of you by any body previous to the making of the contract, as to the number of cubic feet per ton which you had used in working out Pearse's tender?—To the best of my belief, no such question ever was put to me. I have no recollection of any thing of the kind.

1135. Did you make any addition to your report, in consequence of having seen this letter of Scott's of the 18th of February?—No.

1136. When did you first make any new calculation, as to Pearse's contract, showing a different result from that which you have stated in your abstract?—When the inquiries arose in the House of Commons.

1137. Up to that time, do the Committee understand, you had not been asked by any official person at the Admiralty to make a fresh calculation?—Not that I am aware of.

1138. Was that letter of the 18th accompanied by any official letter of instructions?—Not that I know of; I know very little about it.

1139. If there was any official letter of instructions to you, accompanying that letter of the 18th, will such a letter be still in your possession?—It will be in the office, not in my possession; but there was none.

1140. If any letter had been sent to you officially, would it not have been your duty to have made some comment or report on it?—Yes, but there is no order upon the letter.

1141. Was any tender of Johnson's for limestone or granite referred to you on the 20th?—Yes.

1142. How does it happen that neither in the abstract you made of the tenders, nor in your report upon them, Johnson's tender for limestone is adverted to?—It appears to have been a mistake on my part; it appears, in turning over the different tenders, I have omitted this one for limestone of Mr. Johnson.

1143. Are you positive that tender was referred to you on the 20th, together with the others?—I think it must have been; my first impression was, it could not be;

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be; I believe it must, from a note I made in my memorandum here, referring to "the Breakwater" being struck out, which is the case.

1144. Did you, on the same day, report on the tenders for granite?—Yes, both together; I stated Mr. Johnson's was lowest for granite, and Mr. Pearse's for limestone.

1145. From that circumstance, does it not follow that Mr. Johnson's tender for limestone and granite must have been referred to you on the 20th?—Yes, some tender must, and I suppose it must have been this one.

1146. That Johnson's tender for limestone does not appear in your abstract, is owing to a mistake of yours?—Yes, I may account for that mistake; it seems to have been an inadvertence on my part; but one thing that has led to it, is, that, usually, different parties have tendered for limestone to those who have tendered for granite; and I appear to have turned over Johnson's, supposing it as applying only to granite.

1147. If it had been inserted, would it not have stood between the offer of Scott and of Pearse?—It would be above Pearse's, and under Scott's.

1148. Are Johnson's the lowest tenders of all, with the exception of Pearse's tender for limestone?—They are, except the amended one, of the 18th of February, of Scott's.

1149. You did not receive instructions to omit Mr. Johnson's tender for limestone, in consequence of a disagreement which had taken place between him and the Admiralty on the subject of the former contract?—No, I had no instructions of any sort, further than this: "Let Mr. Taylor make an abstract, to show which is the most advantageous offer."

1150. Would it have been your business to make any report on the differences that existed between Mr. Johnson and the Admiralty?—Certainly not.

1151. But did you not take an objection to that part of Mr. Johnson's tender in which he undertook to deliver granite in Catwater only?—Yes; I remarked, he has struck out of his offer "on the Breakwater."

* It applies only to the granite. *See* the advertisement for tenders.

1152. Does that apply to the limestone as well as the granite?—Yes.*

1153. Can you charge your memory so far as to say, whether you carried up the letter of the 18th of February to the Board on the 20th of February, the day the tenders were sent to you, or on the 25th of February, when the matter was finally settled?—My belief is, I carried it in my hand on the latter part of the Board day of the 20th.

1154. What makes you fix it for the 20th?—I think it appeared to have come just within the time; it was written on the 18th, but it came too late for being inserted.

1155. Have you any knowledge of its coming to your hands?—I have none.

1156. Have you any means of discovering?—No.

1157. Did Sir James Cockburn hand it to you?—Decidedly not, it was addressed to the secretary.

1158. When did it get into your hands?—I cannot tell.

Mr. *John James*, again called in; and further Examined.

Mr. *John James.*

1159. WHAT is your office?—Chief clerk of the Contract Department of the Admiralty.

1160. What are the duties of your office?—To make all contracts entered into with the Admiralty, except local contracts made at ports, such as this particular contract; I have also to examine all claims arising out of contracts.

1161. Do all the tenders and contracts come to your office?—All are lodged in my office.

1162. Are all tenders of provincial contracts also referred to your office, or do they come to your office before the contract is signed?—When the tenders are received from a port, they are sent up to town for the authorities to accept the lowest offer; it has been the practice, and, until the consolidation of the office three years ago, they invariably did come to me. In this case they did not, and there have been so few local contracts made—not exceeding twelve in the last three years—that we have hardly had time to form a precedent for them; they used to be referred to me, to see which was the lowest.

1163. What was the first cognizance you had of any thing relating to the tenders or contracts for limestone at Plymouth of the present year?—As far as my memory serves me, it was a call from Mr. Scott, the contractor, and Mr. Johnson, another

another intended contractor, to know the fate of the tenders they had delivered in at Plymouth.

1164. When did Mr. Scott call on you?—The tender was made on the 17th; and I should say it was on the 19th. I said, that I knew nothing of the transaction; but the tender must be at Whitehall.

1165. Were you acquainted with Mr. Scott?—I was.

1166. Can you refer to documents to prove the date of Mr. Scott's calling?—No, Mr. Taylor might do it; I never had seen Mr. Scott, until the morning of his calling, but once before; then he brought some letters from Plymouth, from my friend Mr. Stuart, of the Breakwater.

1167. What did he say on the morning he called?—He asked the result of his tender, and wished to know, whether he had obtained the contract; in ten minutes after, Mr. Johnson called.

1168. Were the tenders in your possession?—Certainly not.

1169. You knew nothing about them?—Nothing of the transaction; I referred them both to Whitehall.

1170. When did you know any thing further of the transaction?—The next time I knew any thing of the transaction was on the 2d of March.

1171. When Mr. Scott came to you, did he ask after any particular tenders of his?—No; he asked who had got the contract; how it had been decided.

1172. Did he ask you whether any tender of his was in time?—Not a word on that point, certainly.

1173. Did he talk of any amended tender?—Yes, he did; he said he had sent in an amended tender; and, by the by, I remember something was said about tenders being received after time; I think something of that sort was said, that Messrs. Johnsons had delivered a tender in after time.

1174. Did he speak to you of his amended tender?—He did.

1175. Did he say what it was?—He did not; I knew nothing of the prices.

1176. Did he say what his amended tender was?—No.

1177. Did he say where he had delivered it, whether at Plymouth, or in London?—I do not recollect that, whether he did or not.

1178. You say he spoke of Johnson having delivered in a tender after time?—Yes.

1179. Did he speak of that, as having been done after time at Plymouth, or after time in London?—After time at Plymouth.

1180. Did he then tell you at what time he had delivered in another tender himself, in consequence of the permission that had been given to Johnson?—The impression on my mind is, that he rather thought it a grievance that he was not allowed to do so; he did not say he had been permitted, but only that Johnson had delivered in a tender after time.

1181. Did he tell you any thing about the time of delivering in his amended tender?—No.

1182. Did he speak of it as a consequence of Johnson's tender being after time?—Certainly not.

1183. Did he say any thing to explain to you, whether his amended tender was made at Plymouth, or in London?—Not, as far as I can recollect; he might have done so; it made no impression, as I knew nothing of the transaction.

1184. Now what took place on the 2d of March?—On the 2d of March I got a note from the Admiralty from a gentleman of the name of Innes:—

Mr. Innes presents his compliments to Mr. James, and requests he will be good enough to forward the accompanying tenders from Messrs. Johnson and Scott, for the delivery of granite and limestone for the Breakwater, by this evening's post, to Captain Superintendent Ross, together with two blank (stamped) forms of contract and bond for execution.

Admiralty, 2d March 1835.

1185. What were the tenders that were so inclosed?—That is the misfortune; as it merely was *in transitu*, I did not keep a record of them; I had only to furnish two blank forms; I remember there were two from Scott, and one from Johnson; whether there were three from Scott or two, I cannot recollect.

1186. Do you recollect the quantity and price that were mentioned?—I recollect this fact, that the amended tender of Scott brought his price exactly the same as Johnson's for the limestone; and that Johnson's was lowest for the granite.

1187. Do you mean to say that on the 2d of March you transmitted to Captain Ross Scott's tender, containing the price of 8*d.* per cubic foot of limestone?—Yes, certainly.

1188. What was the next cognizance you had of the transaction?—Before the 2d of March there had been a notification of the contract having been given to these

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these parties; but it goes through several departments. and it had not reached me; and I might have known it on the 27th of February; on the 12th of March, I received a contract, drawn with Messrs. Scott, for 30,000 feet of limestone at 8¾*d.* per foot; the contract is dated on the 10th.

1189. Having sent two tenders, and only having received back one contract, what steps did you take?—Not any; because I had no part in this transaction; I did not inquire why Johnson's was not sent back at the time; the correspondence was managed at Whitehall.

1190. Having sent two tenders of Scott's, and having received back only one form of contract, did it occur to you that there was any thing irregular?—The two forms did not relate to two different tenders of Scott's, but one for Johnson, and one for Scott.

1191. Did you send two of Scott's tenders, or three?—I cannot recollect, it might have been three; I am sure it was two, because I remarked one was an amended tender.

1192. Can you recollect whether one of the tenders of Scott contained the price of 8¾*d.* and another the price of 8*d.*?—I did not recollect at the time what the higher offer was; and the only thing I contented myself with recollecting was, that it was the same price as Johnson's.

1193. One was 8*d.*, and the other higher?—Yes.

1194. You received back the contract for 30,000 at 8¾*d.*?—Yes.

1195. What was the date of your receiving it back?—I must have received it on the 12th; on the 18th of March I received, through the Storekeeper-general, who is my official superior, this letter:—

"You are to send new forms of contract to the Superintendent at Plymouth, to be executed by Messrs. Edward and R. Scott for a further supply of 30,000 feet of limestone for the Breakwater, according to the accompanying tender."

1196. What was that tender?—I have not got the tender.

1197. Where is the tender? what did you do with it?—That was sent to the superintendent to make the contract.

1198. Do you recollect what was the tender enclosed, and at what price?—No; it would seem they had been called on by the Board of Admiralty, by letter of the 12th, to know on what terms they would supply the additional quantity, and the answer is, "I beg to transmit their reply, together with their original and amended tenders;" all those things I sent back to Plymouth.

1199. What did you receive in return?—I received on the 28th of March another contract.

1200. For what?—60,000 feet.

1201. At what price originally?—Originally 8¾*d.* per foot. The next step in order was on the 4th of April; Mr. John Johnson called on me on the 4th of April, to say he was ready to execute his contract for the granite; at that moment I knew nothing of the contract, except that on the 2d of March orders had been sent to the superintendent at Plymouth to make the contract; in a few minutes after, I received this note, while Johnson was in the office, from Mr. Innes:

Dear Sir,

I SEND you more papers about Johnson's contract for Breakwater granite; Mr. J. is now in your office intending to sign, which you will see by the Board's minute he is to do; perhaps you will let Captain Ross be apprized, when the contract is complete.

Yours truly,

Admiralty, 4th April. *M. Innes.*

NOTE in Mr. *James's* hand-writing:

Returned same day, Mr. Johnson objecting to the clause in the specification as to the time of measuring the stone, which I had no power to alter; it is precisely the same as in Messrs. Scott's contract. *J. J.*

This Board's Minute I then saw for the first time, and there appeared then to have been a delay on the part of Mr. Johnson in executing the contract, which led the Board to come to a decision, that, if he did not sign it within a given time the contract would be vacated; this was the last day of that extended time.

1202. With regard to the limestone, what passed next?—Mr. Johnson, at the time he was sitting in my office, complained that the limestone had been given to a person who had tendered at a higher price than himself; I denied the fact, for I recollected that the tender of Scott was precisely the same, although I did not recollect what the precise price was; he persisted in his assertion, that it had been so; I went to an adjoining room, to refer to the contract which was deposited of record;

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cord; and then, to my surprise, I saw that he was right. I compared it with Johnson's tender, and I saw it was what he said, that it was 8¾ *d.* in the contract. I then wrote a note to the Commissioner's secretary, Mr. Dent, at Plymouth, whom I only know officially.

1203. Was that the same day?—Yes; on the 4th of April I wrote, stating that there must certainly be something wrong, for I well recollected, although I kept no record of the transaction, that the amended tender was certainly precisely the same as Johnson's, and that therefore I was quite sure that there must be some mistake. I got an answer back to say, that there could be no mistake, that they were quite right at Plymouth, certainly; on that I mentioned the circumstance to the storekeeper-general, and he wrote a note to Mr. Dawson.

1204. Who is storekeeper?—The Honourable Mr. Dundas; he wrote a note to Mr. Dawson, who came down to Somerset-place.

1205. What day?—I do not recollect; it must be between the 4th of April and the letter of Mr. Dent, in answer to my second note, that is printed among the papers laid before Parliament.

1206. The administration was dissolved on the 8th of April; was it before or after the 8th of April that you mentioned it to Mr. Dundas, and that Mr. Dawson, in consequence, came to your office?—On the 6th of April I wrote to Plymouth, and I also stated the circumstance to Mr. Dundas; but I had received Mr. Dent's reply, before I mentioned it to Mr. Dundas, and before he sent to Mr. Dawson, immediately I did get an answer I mentioned it to Mr. Dundas; he immediately wrote to Mr. Dawson; whether he came the next day, or the day following, I do not recollect; on the matter being explained, Mr. Dawson, said, it was clearly wrong, that it was clearly 8 *d.* a foot that was intended; I then wrote to Mr. Dent to say, that I had seen Mr. Dawson on the point, and that he had so explained the matter.

1207. What took place nxet?—Then he writes me the reply, dated 15th of April, which is printed in the Parliamentary papers; and my second note to him must have been on the 11th.

1208. And in consequence, was the contract altered from 8¾ *d.* to 8 *d.*?—Yes, I sent it down for the purpose in the letter, and I have here the contract with the erasure; the "three farthings" is taken out.

1209. Therefore, there were but two contracts that were returned to you executed; the first for 30,000 feet at 8¾ *d.*, and the second for 60,000 feet, containing in the first instance the price of 8¾ *d.*, but afterwards the price altered to 8 *d.*?—Precisely.

1210. Was it on the 4th of April that the matter respecting the variance between the tender and the contract was brought to your notice?—Yes, it was.

1211. And that by Mr. Johnson?—Yes.

Jovis, 27° die Augusti, 1835.

HENRY WARBURTON, ESQUIRE, IN THE CHAIR.

[*The Chairman read a Letter he had received from Mr. Dawson, dated Castledawson, Ireland, 23d of August* 1835.]

Mr. *John James*, again called in; and further Examined.

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1212. AFTER receiving the note of Mr. Innes, on the 2d of March, when did you forward the tenders?—By that same evening's post.

1213. Is there any thing in your former evidence that you wish to explain?—I am not aware, except on one point; I stated that on the 4th of April I informed the storekeeper-general, at the time Mr. Johnson had led me to detect the error; I am not quite certain as to that—whether, or not, I wrote first to Mr. Dent, and only made the communication to the storekeeper-general after I received Mr. Dent's answer.

1214. You have stated that an error had crept into the contract, which fixed the amount at which the limestone was to be furnished, at a higher rate than the tender accepted by the Admiralty?—I have.

1215. When was that error first brought to your notice?—On Saturday the 4th of April, late in the afternoon, by Mr. John Johnson.

 1216. Previously

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1216. Previously to that time, had you entertained the slightest notion, or had you received any information, directly or indirectly, that such an error existed?—Certainly not, nor had I the slightest ground for supposing such an error existed.

1217. You first ascertained it in a conversation with Mr. Johnson?—Entirely.

1218. What was the course of the conversation, which first directed your attention to it?—Mr. Johnson came to sign a contract that had been prepared, although not executed, at Plymouth by Commissioner Ross. It was forwarded, with a note, which I read yesterday for the purpose of being executed, and was delivered to me about ten minutes after his arrival. I found he was disappointed, and he expressed himself so, at not having the contract both for the granite and the limestone; I said, "my business was merely to see the contract executed." He made two or three objections to executing the contract: one was, that the specification, appended to and forming part of the granite contract, included both kinds of stone, although it was now only intended he should take one. I said "I had the power to alter that," and I took my pen, and was expunging all the parts relating to the limestone; we then came to a clause in which it was stipulated, that "when the stone was taken away from Catwater at the expense of the Crown, the measurement was to take place;" Mr. Johnson said, "we must insert a clause, that the moment the stone arrived at his wharf at Catswater, Government should fetch it away, or he should have some claim for demurrage." I stated "that was disturbing the terms, and as I had nothing to do with the contract, either in the first instance or afterwards, but was merely the vehicle of communication, I was not authorized to make the alteration." A third objection that he made was, "that the specification being in the handwriting of Mr. Stuart, the superintendent, he had not sufficient confidence in him, without comparing it with the identical specification which he had seen previously at Plymouth, to satisfy himself that they were both alike." Those were the three objections that he made.

1219. What was the precise point in the conversation that brought to your knowledge the fact, that a higher amount was inserted in Scott's contract, than had been allowed by the Admiralty?—He then finally declined signing the contract; and after that, he said, that the limestone had been given to a person at a higher rate than that at which he tendered.

1220. Was there any one of these objections that he particularly dwelt on, as a *sine quâ non?*—All three.

1221. Did he raise any objection of this kind—that the advertisement for tenders had not been for limestone alone, or for granite alone, but was for both granite and limestone; and that if he was lower upon one, and higher upon the other, a balance of the two ought to have been struck, to see which tender upon the whole was most advantageous; and that it was not fair, if he was lower on the granite, to give him the granite, and if he was higher on the limestone, to give the contract for limestone to another—that the two should be taken together?—He made no such observation, nor could he; because he knew that both his prices were the lowest, as compared with Mr. Scott's.

1222. When Mr. Johnson had made that remark as to his tender for limestone being lowest, what reply did you make to him?—I denied it immediately confidently, and I denied it on this ground—that I remembered, when the tenders passed through my hands, and I put them under cover to Commissioner Ross, that the amended tender of Scott was precisely the same as his, although I did not recollect what the price was.

1223. Did he repeat the assertion?—Yes, and on that I went and looked at the contract in one of my adjoining rooms—it was put by there; and then, and not before, having both the documents to compare—having then Johnson's tender with me, I compared them together, and I did see that Scott's contract was three farthings higher than Johnson's tender.

1224. That is to say, the amount entered per cubic foot was 8¾*d.*?—Yes.

1225. What steps did you take, immediately on having ascertained that?—I stated yesterday that my impression was that I had written on the 4th; but as Mr. Dent acknowledges the receipt of my letter of the 6th, and I recollect that it was on Saturday, late in the afternoon, that this conversation took place, I think that it must have been on the 6th, the Monday, that I wrote. I wrote to Mr. Dent to tell him, I was quite sure there must have been a mistake; for although I did not recollect the price, I recollected this important fact, that at least Scott's price was not higher than Johnson's.

1226. Did

1226. Did you then notify that discovery to the storekeeper-general?—Yes, but I am not quite satisfied whether it was on the Saturday afternoon or on the Monday; I think it was the Saturday afternoon, but I cannot positively say so. Whether I waited first for Mr. Dent's note before I made the communication or not, I do not know; my impression is, I made the communication on the Saturday afternoon.

1227. Did Mr. Johnson remain long with you during that interview?—Perhaps 20 minutes, or it might be half an hour.

1228. The storekeeper-general, on having received that intelligence, notified it instantly to the secretary of the Admiralty?—Instantly; he made no communication, until after Mr. Dent replied to my letter. This reply I hold in my hand; it is dated the 8th of April, in answer to my note of the 6th.

1229. Have you a copy of the note you addressed to Mr. Dent?—I have not—considering it a mere clerical error, it was a mere statement of my discovery.

1230. Is the letter you now produce his reply?—Yes; it is dated "Dock-yard, Devonport, 8th of April 1835.

Dear Sir,

I CANNOT better reply to your note of the 6th, than by simply giving you an outline of the authorities under which the superintendent has been governed in concluding the contract for limestone with Messrs. Scott; and therefore, in the first place, the several tenders for the supply of 8,000 feet granite, and 30,000 feet limestone, were forwarded to the Board on the 17th of February, and followed by Admiralty order, 25th, directing contracts to be entered into with Johnson for the former, and Scott for the limestone. Consequently the tenders were sent for, and in a few days returned, accompanied by one from Messrs. Scott, which had not been seen here before. This bore the reduced rate of 8*d.*, but stipulated a double supply of the stone, namely, 60,000 feet, which there was no authority here to engage for. Consequently, while my chief's orders recognized throughout only 30,000 feet, Mr. Scott contended that the reduced price, dependent on the increased quantity, could not be entertained in concluding the contract for the lesser, and either that the subsequent tender must be wholly accepted, or altogether exempted; which argument the superintendent considered quite in accordance with his orders; and the contract was concluded on the 10th of March for 30,000 feet, at 8¾*d.*, the rate of the tender for that quantity delivered in at this yard on the 17th of February. On the 12th of March, instructions were received from the Admiralty to call upon Messrs. Scott to state, whether they were willing to supply a further quantity of 30,000 feet on the same terms, and if so, to extend the contract; and they were accordingly called upon to say, whether they were willing to supply this quantity on the same or lower terms (the fact of the 8*d.* not having escaped recollection). Their reply (14th March) in effect, "that in consequence of an increase of wages to their workmen, they could only supply on the same terms," was sent to the Board, and followed by Admiralty order, 18th of March, to accept their offer, and storekeeper-general's letter, 20th March, to enter into contract for the additional supply, agreeably to the returned tender dated 14th. Consequently, the price being the same as the former contract, it was considered advisable to comprise the whole quantity in a new one; which was done on the 26th, and forwarded to the Board. Perhaps the matter will be more clear before you by the whole of Messrs. Scott's tenders being sent with this; and, therefore, here they are. You may return them or not as the service requires. In looking at this transaction throughout, you should abstract altogether the tender of the 18th February, as a document which my chief has had nothing to do with, officially; and then the matter will appear in a very clear light. I am not aware that Johnson gave in an amended tender—certainly not at this yard; and the tender of the 17th February, upon which his contract was grounded, was the only one we have any knowledge of. Should there be any misunderstanding in this affair, pray write to me, and say how it can be met or settled. There is an ambiguity about it which I cannot comprehend. But I believe adherence to orders will be found the safe plan, and upon this we have acted.

I am, dear sir, very faithfully yours,

John James, esq. Admiralty. *D. Dent.*

1231. It appears, that on the 2d of March, according to the best of your recollection, you transmitted to Plymouth certain tenders?—Certainly.

1232. You do not distinctly recollect what those tenders of Scott's were that you transmitted; but you do recollect that one of them contained the price of 8*d.* for limestone, and another a higher price; now, if you transmitted to Plymouth any tender for limestone from Messrs. Scott, at 8*d.*, there having been but one tender from them at that price, and that for 60,000 feet, it must have been the tender of the 18th of February that you transmitted: how does it happen then, that according to this letter of Mr. Dent, they were ignorant at Plymouth of any such tender ever having been put in?—I understand, and can explain it; it happens, unfortunately, that the correspondence was not all conducted at one place; part of it was conducted at Whitehall, of which we at Somerset House,

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at the time, knew nothing. The storekeeper-general received this notice of what had been done at Whitehall, under date of the 27th of February:—

THEIR Lordships have informed the superintendent at Plymouth, that they have decided on giving the contract for granite, required for the Breakwater, to Messrs. Johnson, and for limestone to Messrs. Scott, to be delivered at Catwater; and they have desired him to enter into the necessary arrangements in conjunction with Mr. Stuart, and to take proper security.

By command of their Lordships,

G. R. Dawson.

When this letter was sent from Whitehall, it was omitted to send the tenders with the order. It seems, in giving these instructions to superintendent Ross, the tenders were not sent; and that led Mr. Innes to send them to me; who, the day following, might have discovered the omission to forward them on.

1233. You say, on the 2d of March, you actually did send to Plymouth certain tenders of Messrs. Scott, among which was one tender containing the price of 8*d.* for the limestone?—Certainly.

1234. Now previous to the 2d of March, there was no tender for limestone from Messrs. Scott at 8*d.*, except their letter of the 18th of February; which, among other things, proposed to deliver, not 30,000 but 60,000 feet at the price of 8*d.*; if on the 2d of March you transmitted this tender for 60,000 feet at 8*d.*, how does it happen that Mr. Dent, in this letter of the 8th of April, speaks of that tender for 60,000 feet at 8*d.* as a matter with which he was unacquainted?—If I understand Mr. Dent's note, he means he was unacquainted with it up to the date of that.

1235. Look at the letter, and refer to the passage?—" In the first place, the several tenders for the supply of 8,000 feet granite, and 30,000 feet limestone, were forwarded to the Board on the 17th of February, and followed by A. O. 25th, directing contracts to be entered into with Johnson for the former, and Scott for the limestone; consequently the tenders were sent for, and in a few days returned, accompanied by one from Messrs. Scott, which had not been seen here before."

1236. Do you recollect the day on which you first saw Mr. Dawson respecting this error in the contract?—Certainly, on the 11th of April, the only time I saw Mr. Dawson on the subject.

1237. Do you know at what time it was, that the storekeeper-general notified the discovery to Mr. Dawson?—It must have been on the 10th, or early in the morning of the 11th, because it was about noon that I saw Mr. Dawson on the 11th; and because also Mr. Dent's letter is dated the 8th of April, and it could not have been received in town before the 10th. I have a memorandum made at the time, when I saw Mr. Dawson,—" Contract returned to be altered to 8*d.*, which, Mr. Dawson had explained to the storekeeper-general, was the intended price,"—that I took at the time.

1238. Be particular in answer to this question; because you may not be aware that an imputation is laid against Mr. Dawson, as having cancelled this contract, upon the change of Government, to avoid the responsibility. What was it Mr. Dawson said, when he came down to discuss with you the error that had crept into the contract?—I was in the Board-room with Mr. Dawson and the storekeeper-general; and I explained what the error was, and that Mr. Dent seemed to contend it was no error. The instant I made the circumstance known, I perceived that in transmitting the order on the 25th of February, no specific direction had been given to superintendent Ross, which of the tenders was to be accepted. The instant Mr. Dawson saw it, he said it was 8*d.* certainly, and he said it must be altered. He then said to the storekeeper-general, or to me, " let the matter be brought before the Board." I replied, that as it appeared a palpable error, I thought a private note from me to Mr. Dent would set the matter right. That measure was assented to accordingly; on the same day I did return the contract to Mr. Dent, explaining that Mr. Dawson had said 8*d.* only was intended, and it was returned to me altered accordingly, with the explanatory letter printed in the papers already.

1239. Was the contract altered in London, or at Plymouth?—At Plymouth, merely by an erasure, taking out the three farthings with a knife.

1240. Did you ever see Mr. Scott on it yourself?—Never, until the morning of his calling on me on that business; I had only seen him once before in my life.

1241. Had

1241. Had you subsequently any correspondence or intercourse with him on the subject?—Not at all; but I saw him afterwards; I certainly saw him once, if not twice.

1242. Did you see him after the erasure made in the contract?—Not after the first interview.

1243. What was the subject on which you saw him?—He called once or twice; I am not certain; it was twice; he stated that he had been down to the Admiralty about his tender; he seemed to complain very heavily of an advantage having been given to one of his competitors, in sending in the tender after the prescribed time; he thought that so great a hardship, that he went down to the Admiralty about it.

1244. Did he mention which of his competitors that was?—I am really not quite certain; but I think he said Johnson; it is a sort of thing that I can hardly trust my memory to speak to with that precision I could wish. I think he named Johnson; he certainly seemed to complain of it, and thought that he had a right to send in another tender—or said that he had sent in another, which, I do not recollect.

1245. Was that all that passed on the second occasion?—Yes.

1246. Was there a third interview you also had?—Yes.

1247. What was the subject of that interview?—The third interview was merely taking leave of me, as he left town; and he then told me, he had obtained part of the contract.

1248. In either of these three interviews, during his stay in town, did he mention to you, that the supply was not to be 30,000, but 60,000 cubic feet?—He did not, certainly.

1249. The first contract was a contract for 30,000 cubic feet, at 8¾*d.*, was it not?—At 8¾*d.*

1250. And before the contract was entered into for the additional 30,000, the signing of the first contract had been executed?—Positively executed, and was in my custody.

1251. Then the contract that appears on the face of the printed papers, is a combination of the two contracts, is it not?—It is.

1252. But the Government at no time went into the market with a proffer of 60,000 cubic feet?—Certainly not.

1253. Nor of two separate instalments, of 30,000 each?—Certainly not.

1254. In the original tender, were not the tenderers required to state the prices at which they would deliver the stone, as well at the Breakwater as at Catwater?—Does the question refer to the limestone or granite?

1255. The limestone; in the contract actually entered into with Scotts for the limestone, do they not undertake to deliver it at Catwater?—Decidedly; it was never required to be tendered for at any other place; it was only the granite that was to be tendered for at both.

1256. Read the part of the tender which shows that?—I think the tender will bear me out in that: "Persons willing to supply and deliver, either at the Breakwater in Plymouth Sound, or at a wharf in Catwater, Plymouth, about 8,000 cubic feet of wrought granite; and, at the same wharf in Catwater, about 30,000 feet of wrought limestone;" so that, as to limestone, it is only at the wharf at Catwater.

1257. Look at the latter part of that advertisement, and read it to the Committee?—"The samples, dimensions, and other particulars of the wrought stone, may be seen at the office of Mr. Stuart, at the Oreston quarries, near Plymouth; no tenders will be received after twelve o'clock of the above day; and the parties, or an agent, should be in attendance therewith."

1258. Have you a copy of the schedule that contained the other particulars?—I have it; it formed a part.

1259. Was it necessary that every person offering a tender should make himself acquainted with the contents of that schedule?—Most certainly, he could not give a tender unless he had seen the forms of the stone, as given on the schedule.

1260. Does not the schedule set forth the necessity of specification per cubic foot?—It does.

1261. For the limestone?—For the limestone.

1262. If then a witness, Mr. Silas Pearse, should have stated, that that schedule contained the necessity of specification per ton, would he have stated that which is not correct?—Most certainly.

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1263. In all town-made contracts, will your experience justify you in asserting, that if they failed to observe the necessary directions of the specification, it would be fatal to the tender?—I should say, that, in this case, it would depend on the nature of the informality; if it had been a case in town, I think I should have rung the bell, after speaking to the Lords, and have desired the person to conform to the terms; if he had not been in attendance, it might, or not, have occurred to me, to suggest a reference to the civil architect, if on the spot; but if neither had been in attendance, I should have then said, it should be rejected for informality; because, not knowing the specific gravity of the stone, there would have been an impossibility of determining.

1264. Then, are you in the habit, in town-made contracts, if you perceive any such informality, of calling it to the attention of the party tendering, so as to give him the opportunity, if he thinks proper, to set it right?—Not, if it is a material departure; I can mention an instance:—we had prescribed the tender should be by the cwt.; a person tendered by the ton; it was sent out to the man (he being in attendance) to throw it into cwts; it was a remarkable circumstance. This man, finding he stood alone, took occasion to raise his price on us, to the amount of an annual difference of about 300 *l.*

1265. Supposing, the tender being made by the ton, the civil architect had reduced it into cubic feet, and then the party had been informed that his tender had been accepted; would you in the contract, have thought it right to insert the price, according as the specification required, not according to the ton, but according to the cubic foot, that is to say, the price which the architect had declared to be equivalent?—It is difficult to say, such a case never having occurred in my experience, what course I should have taken; but I think it would have occurred to me to have referred it to the civil architect. The man not being in attendance, I cannot positively say whether I should have been justified, without writing to Plymouth for the man's consent; I think his assent should be previously obtained.

1266. Supposing he had been informed that his tender would be accepted; would you, on referring to the specification, have required him to sign a contract at so much per cubic foot; and if he refused to sign it per cubic foot, would you then have thought it right to refer the matter to the Board?—I could not have done either one way or the other without the sanction of the Board.

1267. You would have referred it to the Board?--It would have been decided, while I was with them.

1268. Do you know how many cubic feet there are in a ton of limestone?—Certainly not, it must depend on the gravity of the stone; there may be a slight variation, or there may be a great variation.

1269. If it was difficult to ascertain the exact relative proportion, would you have felt yourself still more bound to reject a tender, that was made contrary to the express stipulation of the advertisement?—Provided the civil architect had found the same difficulty.

1270. If a person gives in an offer for a contract with a wrong specification, but you are aware, or have the means of ascertaining, that his offer is much more advantageous to the public than the others; do you state that on the ground of informality, in such a case, the tender would be rejected?—I should say, if we ascertained it was the lowest, we should not have rejected it.

1271. Or if you had means of ascertaining it?—If we had means, at the time, without any delay.

1272. Would it have been a fatal objection?—It would not then, provided it could, at the moment, have been determined to be the lowest.

1273. Have you happened to hear that there was a considerable difference of opinion, how many cubic feet went to a ton of limestone?—In conversation with our own civil architect, I have heard it varies from 13 to 15 feet; but I have heard there is a local usage at Plymouth of computing it at 14. It was not understood by the civil architect; he made an inquiry by order of the Board, and he found that his calculation was not correct.

1274. Consequently the civil architect, in that case, was not a guide to the Board?—He might be a guide, but not a correct one.

1275. Would not so considerable a difference of opinion have rendered it more incumbent on you to have rejected a tender made irregularly?—If the civil architect had said it had been so to such an extent, as not to enable him to determine it with precision; but not else.

1276. Look

1276. Look at No. 1 of the printed papers; if an Admiralty advertisement is published in the newspapers, will it not run in the same words in which it is put forth at the Dock-yard?—Not exactly.

1277. Do you know what advertisement respecting this contract was inserted in the London papers?—Not any, that I am aware of.

1278. Who superintends that?—I superintend the town advertisements always.

1279. It has been stated to this Committee, that, in the London advertisements, there was no mention of twelve o'clock as the hour of the day after which tenders would not be received; was that so?—I have a letter from Plymouth from Mr. Handcock, one of the clerks to the Commissioner, and he does state the papers in which it appeared; it never appeared in the London papers at all; Mr. Handcock says, in addition to the placards circulated in the neighbourhood, the advertisement was published in the following newspapers, and then he mentions a number of country papers.

1280. Was the advertisement in the country papers the same as this?—That was a copy.

1281. Are there copies of those papers kept in the office at Plymouth?—I do not know what the practice is at Plymouth; we do not file the papers in which we insert our advertisements in town.

1282. Had you any interview with Mr. Scott, touching the erasure of the three farthings from the contract?—Not a word.

1283. Neither before nor after?—Certainly not.

1284. And do you again repeat, that neither directly nor indirectly had you the least information or hint respecting that error, until it was brought to your notice by the conversation with Mr. Johnson?—Most decidedly so; I am quite sure Mr. Dawson knew nothing of it, until it was pointed out to him.

1285. You have told the Committee, that on one occasion, when Mr. Scott paid you a visit at your office, he complained of an unfairness—that one of his competitors had been allowed to send in a tender after the time?—I am not certain whether he confined it to one or two competitors; he only spoke of the practice; but he did so complain.

1286. Had you, at the time when Scott spoke to you, his two tenders at your office; the one for 9*d.* the other for 8¾*d.*?—Certainly not, I had never seen any of the tenders from any party at that time; I must observe that Mr. Scott called on me to learn from me what, at that time, I was totally ignorant of; and I learnt it for the first time from himself, that the tenders had been called for; he brought up a specification in his hand, similar to that in the contract, from Stuart; and that gave me the first knowledge of the transaction.

1287. He called on you more than once?—Yes. At neither of those periods had I seen a tender, nor did I know the contract had been disposed of to any one.

1288. Did he tell you he had himself sent in a second tender at Plymouth, in consequence of the unfairness of which he complained?—I have been trying to turn that over in my mind, and I cannot bring myself to determine that; whether he said he was going down with an additional tender to the Admiralty, or whether he had sent in one; I cannot positively recollect which it was; he did speak of an amended tender; that he either had, or was going to make one.

1289. Did you learn from Scott, at any of these interviews, that he had got the contract?—I did, at the last, as I before stated; he came hastily one afternoon, just to take leave, and stated: "I have succeeded, I have got the limestone contract."

1290. Did Mr. Johnson ever sign the contract?—No, he objected to it.

1291. Did he object to the former contract?—Yes.

1292. Are not Messrs. Johnsons, the contractors, very troublesome men about signing contracts, and as to the terms of contracts?—I should say, exceedingly so.

1293. Have you had to do in many contracts with Mr. Johnson?—Yes, I have.

1294. From the commencement of the Breakwater?—Yes, I have.

1295. Has the Admiralty had contracts with them, as to any other works?—There was one contract he took for the Breakwater; and another which he proposed to take, which went off in the same way, as he objected to the granite. It was intended to go on with the casing of the Breakwater—the engagement was put on one side.

1296. Who got the contract?—There was none ever made; the Government proceeded by its own means.

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1297. What is the contract on which he has a claim of 20,000 *l.*?—A contract of March 1830, for merely the rubble work.

1298. What is the nature of the dispute between him and the Government?—It embraced a variety of points.

1299. As to quantity?—No, one of the points in dispute was this: the specification spoke of the measurement being at so much per yard, measured over the whole surface, and there was a dispute as to what was to be considered the surface.

1300. As to superficial or square measure?—No, it was known to be the running measure; it was how the Breakwater was to be measured. It goes in a slope, and Sir John Rennie, the engineer, contended that only the top should be considered the surface.

1301. Is that settled?—Yes, it is, it has been submitted to arbitration, and an award has been made.

1302. Was there an arbitration bond?—Yes, Colonel Fanshawe was the arbitrator.

Sir *James Cockburn*, called in; and Examined.

Sir *James Cockburn.*

1303. HAD you any interview with Mr. Scott, of Plymouth, on the 20th of February last?—I really cannot speak positively to the day, but I had an interview with him, when he came to town about his contract.

1304. At what time of the day did you first see him, and where?—At my office in Spring Gardens, and I should think between twelve and one.

1305. Did he state that he had arrived that morning from Plymouth?—Yes, I calculated that he had arrived that morning; and he said he had been waiting for some time at the Admiralty to see Mr. Dawson, and that he could not see him; and he asked me if I would go over and inquire, whether his tenders had been received. I said, "I would with all my heart;" I said, "you had better come along with me, the Board is up by this time." That makes me think it was between twelve and one.

1306. Did you understand from him that he was anxious to know, whether his tender had been received?—Yes; he said, "I have come up to tender for the contract for stone;" and I said, "What stone?" he told me, "Stone for the Breakwater;" and he said that he was anxious to know, whether his tender had been received. He had been waiting to see Mr. Dawson on the question; he had sat there two hours, and could not see him.

1307. When he stated he had come up to tender, did you understand he referred to some tenders he had already sent in at Plymouth, or to some tenders he had brought with him?—I understood the tenders were sent in; whether he had brought them, or given them in, I did not know; I knew nothing about the matter.

1308. Were you acquainted with him before?—Yes.

1309. Did you represent your brother at Plymouth during the last election?—Yes; and I do not hesitate to say, that I was exceedingly obliged to Mr. Scott during the election; and as far as I was concerned, if I could have done him any favour, I would.

1310. What took place upon this conversation?—I asked him to come with me; I took him by the arm, and went over to the Admiralty; I sent in my name, and I said, "I wish to see Mr. Dawson;" Mr. Dawson saw me in his room. I cannot quite say positively whether Mr. Scott went in with me, or whether we sent for Mr. Scott; but I know one or the other took place.

1311. Upon seeing Mr. Dawson, did you inform him who Mr. Scott was?—Why, I am not certain whether Mr. Scott went into the room with me; if he did, he would have showed himself who he was; the impression on my mind is, that I said, "Mr. Scott had called on me, and had come over with me, to know whether he had got the contract," and Mr. Dawson said, "Let him come in." He certainly came into the room, and I think I mentioned first that Scott was there, before he came in.

1312. Did you say who Mr. Scott was, or was it necessary for you to explain who Mr. Scott was to Mr. Dawson; or did you state any thing that should recommend Mr. Scott?—Not the least word about it. I rather think Mr. Dawson must have known who he was; he must have been aware that Mr. Scott had been of great assistance to me in my brother's election.

1313. Was any thing expressly stated by you to Mr. Dawson, or did Mr. Dawson let fall any thing in conversation with you, from which you are led to believe that Mr. Dawson knew who Mr. Scott was; meaning that he was a person who

who had been useful to you or to Mr. Dawson at the elections of Plymouth or Devonport?—Certainly not at that time; but I believe Mr. Dawson must be conversant of it, when he saw Mr. Scott.

1314. What further passed?—Then I told him, Mr. Scott had come to me to request I would ascertain, whether his tenders had been received; and whether he had got the contract?—Mr. Dawson said, "I do not know any thing about the matter; but they have been read at the Board." He then rung the bell, and sent for the clerk who had the tenders; and desired him to bring them in; the clerk brought in the tenders. Mr. Dawson then took them, and looked at them, and said, "Yes, here are two tenders," I think, I am not sure—that he said "two," or whether he said, "here are the tenders."

1315. Did he say two or three?—I do not know; "here are the tenders," I know he said; he said, "Yes, Mr. Scott, here are your tenders; but the Board have not yet decided on them."

1316. Did any conversation pass as to this point, whether some tender had arrived in time or not?—That was what I understood Mr. Scott was anxious to ascertain, whether his tenders had been received.

1317. Do you recollect whether Mr. Scott, during this interview which you and he had with Mr. Dawson, delivered to Mr. Dawson any paper, purporting to be a tender?—I can say most decidedly, upon my honour, he did not.

1318. Did he deliver to you any paper, purporting to be a tender, requesting you to deliver it to Mr. Dawson?—He did not.

1319. Then in the conversation that took place between you, the tenders were referred to as papers that had been already delivered?—They were, most decidedly.

1320. And which had been before the Board?—So I understood; the clerk brought them in, certainly. Where the clerk got them, I cannot tell.

1321. What further passed?—I think Mr. Dawson asked Mr. Scott a question about how many feet there were in a ton of stone; and Mr. Scott entered into some explanation, which I did not attend to; that there was a difference in that respect between the engineers and the trade, that the trade reckoned so many cubic feet, and the engineers so many cubic feet, to the ton. I think Mr. Scott mentioned what he had tendered at; I think he said, if his tender was reduced to tons, that it would be 8 *s.* a ton; I am not positive exactly as to that.

1322. Did any conversation take place respecting any of the competitors or competitor with Mr. Scott for the tender?—I rather think, if I recollect right, that there was something said about Mr. Pearse; I think Mr. Dawson asked a question (if I recollect right) whether he knew Mr. Pearse, and whether he was a man of property?—I think so; I am sure he did.

1323. Did the conversation respecting Mr. Pearse commence with a question from Mr. Dawson, or did it commence with Scott?—The conversation I allude to, certainly commenced from Mr. Dawson. I and Scott were going away when we had got this information, and Mr. Dawson said something; "By the by, Mr. Scott;" then he asked him a question about Mr. Pearse.

1324. Did any conversation take place, either on the part of Mr. Dawson or Mr. Scott, as to any particular tender having, or not having, arrived within time?—Not that I recollect.

1325. Do you recollect any more of the transaction?—Nothing more; we went away then.

1326. Do you remember any thing further respecting this conversation?—Not the slightest, except that two or three days after, Mr. Scott called on me, and said, "He was going down to Plymouth, and wished to know, whether he had the contract or not?" and asked me if I could inquire; I went over, and asked the question. I asked Mr. Dawson, "Pray have you decided on the tenders?" and he said, "Yes, orders have gone down, or are going down, to accept Mr. Scott's tender;" and I told Mr. Scott that was the case; and from that time to this I never heard any more about it.

1327. Can you recollect what the date of the latter occurrence was?—I am sorry to say I cannot; it was two or three days after this previous conversation, or three or four days.

1328. Did any thing pass in that conversation between you and Mr. Dawson, or between you, Mr. Dawson and Mr. Scott, which indicated that Mr. Dawson knew who Mr. Scott was, as connected with Plymouth or Devonport?—Certainly; there was no question asked as to that point; nothing passed that indicated he knew him; but I do not know that I quite understand the question.

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1329. The question is, whether on your first going to Mr. Dawson, or afterwards, when you three were together, any conversation took place, which indicated a knowledge on the part of Mr. Dawson of Mr. Scott as a Devonport and Plymouth man, connected with the election?—Certainly not; no conversation took place as to it.

1330. Where does Mr. Scott live, at Plymouth or Devonport?—At Plymouth.

1331. Were you present in the room, when Mr. Scott was ushered into Mr. Dawson's presence?—Yes, that morning that I went with him; I rather think he went in with me.

1332. Did that appear to be the first interview, after Mr. Scott's coming to town, that he had had with Mr. Dawson?—Yes, certainly.

1333. On Mr. Scott's entering the room, did Mr. Dawson shake him by the hand, or in any other manner visibly recognize him as a party with whom he was acquainted?—Yes.

1334. Now state what took place?—Why, nothing more than usual; he bowed to him as he came into the room, and said, "how do you do, Mr. Scott?" and acted the same as he would do to any other person that he had seen before, or was acquainted with; I should say he certainly knew him, when he came into the room.

1335. Are you quite sure that Mr. Dawson shook Mr. Scott by the hand?—I did not mean to say that, and I never did say it.

1336. Are you sure that he addressed Mr. Scott by name?—No, certainly I am not; but when he came into the room, he made a bow to him, and recognized him. I mean to say precisely this: the door opened from the board-room; in walked Mr. Dawson; he spoke to me, and shook me by the hand, and certainly bowed to and recognized Mr. Scott; I said, "here is Mr. Scott, Mr. Dawson;" and he bowed to him.

1337. When Mr. Dawson came into the room, did you mention to him Mr. Scott's name?—Most undoubtedly I did.

1338. You mentioned his name, before Mr. Dawson said, "how do you do, Mr. Scott?"—I have no doubt I did; the first thing I did, when he came into the room, was to say, Mr. Scott was with me.

1339. In the manner in which Mr. Dawson received Mr. Scott, was there any thing more than that ordinary courtesy that always takes place between gentlemen on their meeting?—Certainly not; that is what I meant to express was the case.

1340. There was nothing, then, of familiarity; nothing which could lead you to declare, that this was the recognition of an old acquaintance?—Certainly not.

1341. Had you previously sent up any note to Mr. Dawson, saying who it was that was desirous of having an interview with him?—I sent a message in.

1342. What message?—I should think it was to say, that I wanted to see him; whether I said that Mr. Scott was with me, I do not know.

1343. How long did you remain with Mr. Dawson?—I should think five or ten minutes; a very short time; merely during the time the conversation took place.

1344. You say Mr. Scott lives at Plymouth, and not at Devonport?—Yes.

1345. Has he any manufactory at Devonport?—I do not know; not that I am aware of; he is a brewer at Plymouth.

1346. Is this all that passed, relative to Mr. Scott, between you and Mr. Dawson?—Entirely.

1347. Or between you and Mr. Scott himself?—Entirely.

1348. To the best of your recollection, do you remember that you further explained to Mr. Dawson who Mr. Scott was, than simply by saying, this is Mr. Scott?—No, certainly not.

1349. You do not believe you ever explained to him who Mr. Scott was?—Certainly not; I made no specific explanation to him about it.

1350. Not at any time?—No.

1351. You did not say that he was the person whose political influence had been serviceable at Plymouth or at Devonport?—Certainly not.

1352. Or that he was a person in whom you took an interest, because he had been of assistance to yourself?—I did not; it was generally notorious that he had assisted my brother; any body would have known that.

1353. Did Mr. Scott at any time show you the letter of the 18th of February?—[*handing the Letter of the 18th of February to the Witness.*]—No; he never showed me this letter; I have seen the letter printed.

1354. Did you ever see that letter before?—No, unless this letter was in the bundle that was brought in by the clerk at the Admiralty.

1355. Did

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1355. Did you particularly examine any of the papers that were brought in by the clerk?—I did not; Mr. Dawson looked them over at his own table, and said, "here are Mr. Scott's tenders; they are here, Mr. Scott."

1356. Did Scott at any time tell you that he was going to write a letter to the Admiralty on the subject of his tenders?—Not a word; I understood that he had sent them in, when he called on me in the morning; that he had written and sent in his letters, and he wanted to know what the result of them was.

1357. Did he say any thing which led you to believe that he had that morning, before he had seen you, sent in any letters; or that he had sent them in at Devonport before coming to London?—No, it was merely generally, that he wished to know whether his tenders (in the plural number) had been received.

1358. But he said nothing which showed whether he spoke of tenders made at Devonport, or in London?—No, not at all.

1359. You did not state to Mr. Dawson any reason why you went with Mr. Scott to the Admiralty?—None in the world, particularly; I concluded he would understand he was a friend of mine, or else that I should not have taken the trouble to have gone with him.

1360. Can you fix with certainty the day when you learnt from Mr. Dawson that Scott's tender had been accepted?—I cannot, I have no possible means of doing so; I merely asked the question to oblige Mr. Scott, and asked no more about it.

1361. The 20th was on a Friday?—It must have been a few days after that.

1362. Was it so long after, do you think, as the Wednesday following?—I should think not; I cannot answer the question with that accuracy which would make my answer valuable; I should think not so long.

Thomas Roberts, called in; and Examined.

Thomas Roberts.

1363. ARE you the clerk of Mr. Mackintosh?—I am.

1364. Is he a person who tenders for public works, for excavating, and so on?—He does.

1365. Did you attend for Mr. Mackintosh at Plymouth, on or about the 17th of February last, for the purpose of putting in a tender for the supply of limestone and granite for the Breakwater?—I did.

1366. How long before the hour of twelve o'clock did you put in Mr. Mackintosh's tender?—Not exceeding half an hour before twelve; perhaps not so much as half an hour.

1367. Were you present at any conversation that was had with the superintendent of the yard, Captain Ross, on the subject of putting in the tenders after the hour of twelve?—I was not.

1368. After twelve did you hear of any such conversation?—Not with Captain Ross.

1369. Were you present at any conversation with any other party connected with the yard, on the subject of putting in tenders after twelve o'clock?—I was, with Mr. Dent.

1370. State who was present, and what passed?—I do not recollect the whole that were present; there were Mr. Pearse, Mr. Elliot of Penryn, Mr. Spargo, Mr. Sparrow, Mr. Simons, Mr. Scott; and two or three others; but I do not recollect exactly at this moment.

1371. What passed?—The parties present expressed themselves dissatisfied that the tenders were not opened at the time stated—twelve o'clock—and we were given to understand that they would not be opened until the evening, or late in the afternoon, and that there was a tender to be delivered after twelve o'clock.

1372. Whose tender did you understand was to be delivered after twelve?—Messrs. Johnson's.

1373. Was it stated that you were, all of you, or any of you, to have the opportunity, if you pleased, of putting in a second tender, after the hour of twelve?—I do not recollect that it was offered to all; it was stated by Mr. Dent that those parties who felt inclined, might withdraw their tenders.

1374. Were you aware that any parties had put in tenders after the hour of twelve o'clock, beside Mr. Johnson?—I am not aware that any person did.

1375. Did you attend at Mr. Stuart's office at Oreston for the purpose of seeing the samples?—I did not; I know the sample of the granite, because I prepared one of them for Mr. Mackintosh.

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1376. Did you attend to see the samples of limestone?—I did not; the fact is, I was ill at the time, and a person in Mr. Mackintosh's employ went to take a copy of the specification—a person of the name of Ross.

1377. Who attended on the part of Mr. Mackintosh at Mr. Stuart's office to receive all the information necessary respecting the specification?—A gentleman of the name of Ross saw the advertisement in a newspaper, and went to Oreston to take a copy of the specification.

1378. Is he in London?—Yes.

1379. Were you informed while you were at Plymouth, either by Mr. Stuart, or did you collect from the conversation of the other gentlemen who tendered, that not 30,000, but 60,000 cubic feet of limestone were likely to be wanted for the use of the Breakwater?—I did not understand it, at the time of delivering the tender; I heard of it afterwards.

1380. How long after?—I do not exactly recollect; but within a few days I heard it—within a few days after the tenders were delivered.

1381. Did you stay at Plymouth after the tenders had been delivered in?—I have been at Plymouth staying until within the last six weeks.

1382. From whom did you hear that more than 30,000 cubic feet would be wanted?—I cannot exactly recollect—in the course of conversation with some individual.

1383. Who do you think that was?—I think I heard it through a Mr. Richards, who was present at the time of the delivery of the tenders; but whether he delivered a tender, I do not know.

1384. Was it generally talked of among the gentlemen who attended to make tenders, when they met together in the yard, that 60,000 feet would be wanted?—It was not.

1385. Not to your hearing?—It was not within my hearing.

1386. Was it known at Plymouth to you that Mr. Scott had been allowed, on the day of the 17th, to put in a second tender, after the hour of twelve?—I was not aware that he had been allowed to do it.

1387. Was it known that, subsequently to twelve, he had proceeded to London, and put in another tender?—I was not aware that he had delivered more than one tender.

1388. Are you conversant with the practice of putting in tenders of this description?—I have attended with tenders before.

1389. You know what the practice is of men of business, and what they consider fair in these transactions?—It is generally considered that no tender should be received after the stated time.

1390. Do you think it was treating the gentlemen who put in tenders on that occasion, fairly, to allow tenders to be put in on the day of the 17th, after the specified hour?—I did not consider it fair.

1391. Do you think it was fair, if such a transaction as this happened, that on the 19th or 20th one of the parties was allowed to put in another tender?—I should say it would not be fair; I should say decidedly not.

1392. Do you know how many cubic feet of the Plymouth limestone go to the ton?—We used to receive 12 cubic feet, but it is rather a nominal quantity than a positive one.

1393. How many cubic feet actually go to the ton?—I should think 13 would be about a ton.

1394. Supposing Mr. Mackintosh, or you acting for him, were to make a tender of limestone to Government at Plymouth for the Breakwater, at so much a ton, would you consider him under contract to deliver at the rate of 12 feet to the ton, or at the rate of the actual number of feet which go to the ton?—I think that he would be bound to deliver the actual weight, and that he would consider himself bound to do so.

1395. Have you attended to the qualities of the limestone in the different quarries about Plymouth?—I have seen a little of it, but I am not a competent judge—I do not think I am; I should be tenacious of giving a positive opinion about it.

1396. Has Mr. Mackintosh ever been concerned in delivering limestone for Government works?—He has built all the new victualling establishments down at Plymouth, most of which are with limestone.

1397. Has Mr. Mackintosh had any dealings with Mr. Silas Pearse for the supply of limestone?—Yes, he has.

1398. Was

1398. Was the limestone supplied by Pearse from his own quarries?—I believe it was.

1399. Was it of the fair average quality of the Plymouth limestone?—Yes, I consider it was.

1400. Did he act like a man of punctuality in business in supplying Mr. Mackintosh?—Quite so.

1401. To what amount did he supply Mr. Mackintosh with limestone?—Between 700*l.* and 800*l.* in value.

1402. In one year?—Not in one year.

1403. To what extent in one year?—I think he was about two years and a half in delivering the whole.

1404. Did he supply it, as your wants required it?—According as we demanded it of him.

1405. Had you any occasion to complain of him for want of punctuality in business, in making the supply?—I am not aware of any occasion to complain of him.

1406. Are you able to state whether the limestone in Pearse's quarries is in any respect inferior to the limestone in Scott's quarries?—I am hardly a sufficient judge; my opinion is, it is not inferior, as far as I am capable of giving a judgment.

1407. How long is it ago that Pearse supplied Mr. Mackintosh with limestone?—I believe it commenced in the latter part of 1830; and the last he delivered was in the early part of 1833.

1408. Have you known Pearse for any time?—I have only known him in the way of business.

1409. For how long?—From the latter part of 1830.

1410. The business Mr. Mackintosh had with Pearse, extended from 1830 to 1833?—Yes.

1411. During that time he was regular in the business he transacted?—Yes.

1412. Has Mr. Mackintosh had any occasion for limestone since 1833?—I think not; I think Pearse supplied the last he had.

1413. The last he had from any person at Plymouth whatever?—From any where.

1414. Except that transaction that you speak of, from 1830 to 1833, have you any other knowledge of the competency of Silas Pearse?—I have not.

1415. Then from the period of 1833 to the present time, you know nothing at all of the competency of Mr. Silas Pearse?—I do not.

1416. What was the nature of Mr. Mackintosh's contract with Mr. Pearse?—To supply stone at per foot.

1417. Was it by the ton, or by the foot?—By the foot; there was a small part of it at per ton.

1418. Was it a written agreement?—No written agreement.

1419. What was your mode of paying Mr. Pearse; by the week, month, or how?—We had no particular mode with him; when Mr. Pearse required his money, he came for it, and had it; whether it was once in one month, or three.

1420. Was it not more in the nature of a purchase than a contract?—No, it was not, because they knew when we made our payments.

1421. How do you make it out to be a contract, a contract being a specific agreement to deliver a certain quantity at a certain price?—The fact is, we hardly knew what quantity we might want; we went to Mr. Pearse and other people, and said, "we require stone of such and such description."

1422. During what period was it that you paid the 700*l.* or 800*l.*?—From the latter end of 1830 to May 1833.

1423. Does Mr. Mackintosh make sub-contracts?—Generally in the same way; at Plymouth, for instance, he had an agreement with one party only; and if that party could have supplied all his stone, he would not have gone elsewhere for it.

1424. Was there any written agreement for a specific quantity, at a certain price, to be delivered within a certain time, with Pearse?—There was not.

1425. Was it known at Plymouth that Mr. Johnson delivered in a tender after 12 o'clock?—I cannot speak positive of it; we were told by persons present (I think Mr. Johnson's clerk) that up to nearly 2 o'clock, when I left the yard, he had not delivered his tender, and that he did not intend to deliver it, until the evening.

1426. Was it matter of conversation among you, that it had been delivered?—That it had not been delivered.

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1427. Has Mr. Mackintosh had any other dealings with Mr. Pearse?—I am not aware.

1428. Did you see any of the blocks that were dressed for the supply of the Breakwater?—I did, the granite.

1429. Any of the limestone?—I saw some blocks lying in Mr. Scott's quarry.

1430. Is that block of limestone on the table—[*showing to the Witness the block produced by Mr. Silas Pearse from his quarry*]—more cleanly, or more roughly dressed, than the blocks were that you saw at Mr. Scott's quarry for the supply of the Breakwater?—I should say, looking at it, about the same.

1431. Did Mr. Mackintosh, on the 17th of February, send in any tender for limestone?—He did.

1432. At what price did he tender?—Ten-pence halfpenny per cubic foot.

1433. Had Mr. Mackintosh any difference with the late Board of Admiralty?—I do not know that he had any difference with them, he has an account unsettled for, at Plymouth.

1434. Is there not a considerable difference as to that account?—There is a difference; I do not know exactly the amount.

Mr *John Johnson*, called in; and Examined.

Mr. John Johnson.

1435. ARE you a stone merchant?—Yes, I am.

1436. Did you attend at Plymouth, in February last, for the purpose of tendering for granite and limestone, for the use of the Breakwater?—I did.

1437. Is that the tender you put in?—Yes.

1438. Is that your handwriting at the bottom?—Yes; "John Johnson, Plymouth."

1439. Whose writing is the body of the tender?—My clerk's.

1440. Whose are the figures?—Another of my clerk's, who attended the Dock-yard.

1441. Whose are the words "at per foot?"—Mr. Trayer wrote those words, and the figures.

1442. Where were these figures filled in?—At the Dock-yard.

1443. Where?—Just at the entrance of the gate.

1444. At any body's house?—No, there is a place there to write.

1445. At what hour did you attend in the Dock-yard, for the purpose of tendering?—Eleven o'clock, or after that time.

1446. Did you put in any tender before twelve o'clock?—No.

1447. Did any thing take place between you and the other gentlemen who attended to tender, or between you and Captain Ross or Mr. Dent, on the subject of putting in a tender after the specified hour of twelve?—When I went to the Dock-yard, I did not know the time of tendering; I went to Mr. Dent's office, and asked at what time I was to send in my tender; and he stated, "Any time before four o'clock."

1448. State all that passed on the subject?—I was waiting for my clerk coming down with the papers, and met Mr. Scott and several other persons, waiting.

1449. About what o'clock?—About ten minutes before twelve—thereabouts; and Mr. Scott asked me if I had sent in my tender; I said, "I had not;" he asked me why I had not sent it in, as it was nearly twelve o'clock, and that it would be excluded if it was not sent in before twelve. I said, "No such thing, for that I had been to Mr. Dent, and he had stated to me, if I sent it in before four o'clock, it would be in sufficient time." Mr. Scott and several others said, that if that was the case, they would either send in fresh tenders, or have their tenders out from the box again; I said, "I had nothing to do with that, as a matter of course." I told them very candidly I had not sent in my tender, and was not prepared just then; but should send it in at the time stated; and I did, very soon after twelve o'clock, send the tender in.

1450. About what o'clock?—It might be about half past twelve.

1451. Did Mr. Scott, or any of the other gentlemen, go, and in your presence remonstrate with either Captain Ross or Mr. Dent, on the subject of the tenders being put in after twelve?—Yes, while Mr. Scott and the rest of them were speaking to me about putting in the tenders, Captain Ross came up on the Terrace, and I stated what Mr. Dent had stated to me, "that any time before four o'clock would be sufficient time;" and Captain Ross said, "Whatever Mr. Dent has stated, of course he knows about it, and it is quite correct; and, therefore, I shall receive the

the tenders, at the time stated by Mr. Dent, from any body." He told Mr. Scott so, and the rest of the gentlemen who were waiting there.

1452. Did you produce any London newspaper from your pocket, in which the contract was advertised, without specifying any hour, upon the 17th, on or before which the tenders must be delivered in?—I do not know what paper it was cut out of; my clerk gave me a printed advertisement, and that did not state the time; and that was my reason for going to Mr. Dent to ascertain up to what time the tenders would be received.

1453. And did you give that as a reason to Mr. Dent, why you had a right to put in any tender after the hour of twelve?—I am not certain whether I stated that to him; I stated it to Mr. Scott, I know.

1454. Do you know from what paper that advertisement was cut out?—I do not. It was cut out by my clerk. I was only down there a few hours before the tender was put in.

1455. Before the day of putting in the tenders, did you go to Mr. Stuart's office at Oreston, for the purpose of looking at the samples of limestone?—I did not; my clerk was there.

1456. Who was your clerk?—Philmer, I think; but I am not certain, whether it was him or Cole.

1457. Is that clerk in London?—They are both at Plymouth.

1458. Did that clerk report to you what had taken place at Mr. Stuart's?—Yes, he did; he stated what the samples of stone were, and how they were dressed; and he gave me the estimate as to how much it was worth a foot to dress them.

1459. Did he state to you that the specification was to be made per cubic foot?—Yes, he did.

1460. Did your clerk inform you that Mr. Stuart, or any other person at the office, had intimated, that, not 30,000, but 60,000 feet was the quantity of limestone likely to be wanted by the Government in that year?—I think I heard something about an additional quantity, if the Parliament voted an additional quantity of money.

1461. Was this before the 17th?—It was after my tender was filled up and sealed.

1462. Who gave you the information?—That I am not certain about, it was a sort of conversation with somebody; I am not certain when it was that I heard it; I know I did hear about it.

1463. You think it was not until after you delivered in your tender?—I am satisfied of that.

1464. Did it come to you in any official shape?—Not at all.

1465. Did your clerk report to you that such information had been given to him at Mr. Stuart's office at Oreston?—No, I do not remember that he gave it in that way; my clerk might have mentioned it to me; I heard it somewhere.

1466. Did you know that Mr. Scott had put in a second tender after the hour of twelve?—I think he told me so himself.

1467. After the day of putting in the tenders, did you proceed to London?—I heard that Mr. Scott had come to London.

1468. Look at that block of limestone; is that a fair sample of Plymouth limestone—is it of fair, good quality?—[*The Witness examined the block produced by Mr. Pearse.*]—I should say that it is of very good quality, of excellent quality.

1469. Is that more finely or more roughly dressed than the blocks which are required to be sent in for the supply of the Breakwater?—It is rather better dressed.

1470. Do you know the sort of measurement that is required by the person appointed to receive the limestone at the Breakwater?—We have always bought the stone at 12 feet to the ton, when we have bought it.

1471. The question refers to the time of delivering it?—We never deliver it, dressed in that way, by the ton; it is a very unusual way to deliver it.

1472. You are asked as to the measurement. Take a ruler in your hand, and tell the Committee how much there is, fair measurement, in that stone?—As near a foot cube as possible.

1473. Do you think, if you delivered such a block as that, it ought to be received as a foot cube?—Yes.

1474. When you buy limestone, you buy it by the ton?—We buy it by the ton, when our masons dress it; from the quarries we buy it, in the rough, by the ton.

 1475. Have

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1475. Have you ever bought it in the dressed state by the ton?—No, never.

1476. By the ton, you mean 20 cwt.?—Yes.

1477. Is it actually weighed?—No.

1478. How do you ascertain the weight?—We ascertain it by our vessels when we take it by water; and when we do not take it by water, then we allow 12 feet to the ton.

1479. Now, if you had contracted to deliver it to the Government at so much a ton, and then, for your own satisfaction, you wanted to ascertain at how much you had delivered it per cubic foot, what is the mode in which you would make the calculation?—Twelve feet.

1480. Do you know whether 12 feet is the actual quantity of feet that go to the ton?—Limestone varies so much.

1481. Plymouth limestone?—In different quarries, it varies very considerably as to its weight; we have made our bargains always for 12 feet for the ton, as the custom of the port.

1482. Is that in its rough state; the question refers to limestone in the dressed state, in which state it is required for supplying the Breakwater; supposing you had agreed to deliver dressed limestone to the Government at so much a ton, in reducing it to cubic feet, how many cubic feet would you take to the ton?—We should divide the whole quantity by 12.

1483. Then it varies so much in weight, that you do not know whether that would be a larger or a smaller number than you ought to take?—I should think it would vary, from the highest weight to the lowest weight, not more than half a hundred weight.

1484. If you had made a tender to Government at so much a ton, and, on signing the contract, Mr. James had stated, "We wish to have it expressed, not by the ton, but at so much the cubic foot;" how many cubic feet to the ton should you consider yourself bound to supply?—Twelve; I have got many thousand of tons at that rate.

1485. Dressed limestone?—Dressed limestone; I have not bought it in dressed; I buy it in rough.

1486. Have you ever dealt for dressed limestone?—It is in this way; the quarry-men have nothing to do with the dressing of it; we buy it of them by the ton, and we ascertain the tonnage after it comes out of the mason's hand; and as many 12 feet as we have paid the masons for dressing, we then pay the quarry-men so many tons for.

1487. Does any of it measure as much as 13 feet to the ton?—It might; I dare say some might do that.

1488. Do you know the different quarries at Plymouth?—Every one of them.

1489. What is your opinion of the quality of the limestone at Mr. Pearse's quarries, as compared with the limestone at Mr. Scott's quarries?—I should say that it is quite equal in value.

1490. Quite equal in quality?—I think so; if I had had the contract, I was looking to Mr. Pearse's quarry as a good situation to have procured the limestone from.

1491. Have you ever had any dealings with Mr. Pearse for limestone?—A few little transactions, but nothing of any consequence.

1492. You say that you proceeded to London, hearing that Mr. Scott had set off for London?—I did.

1493. Had Mr. Scott set off for London before you left Plymouth?—Yes.

1494. On what day did you set off yourself?—I will not be quite certain of the days of the week from memory; the following day after the tenders were sent in, Mr. Scott, I understood, left for London.

1495. Do you mean, he left for London on the 18th?—I understood so.

1496. You do not know that he did?—No.

1497. Was it that information that induced you to set off for London?—Yes.

1498. What made you wish to come to London, when you heard Mr. Scott had set off for London?—I could not understand what object Mr. Scott could have in coming to London.

1499. On coming to London, what steps did you take on the subject of the tender?—None, when I came to London.

1500. Where was the use then of your coming to London?—I thought I might hear something in London, I could not hear at Plymouth; and I thought if Mr. Scott

Scott had gone any where to make inquiry about the tenders, or sent in any other tender, I might have an opportunity of knowing it.

1501. Did you hear in the course of that day, or the next evening, what were the prices at which the different competitors had tendered?—No, not for several days after I had the information about my contract for the granite.

1502. Did you hear any thing about it at Plymouth before you set off, what the prices were?—Not a word.

1503. Did you endeavour to ascertain, when you were in London, what the prices were?—No.

1504. Now when did you ascertain the terms of the contract that the Government had entered into with Mr. Scott for the limestone?—I heard it spoken of among the workmen.

1505. Where?—At Plymouth, when I went down again.

1506. What did you hear respecting it?—My workmen had struck for wages, for prices; they said we had entered into a very low contract, and they thought they had no business to work at the old prices; for in consequence of the strikes a year or two ago from other places, they thought now they had a right to strike on this work, and demanded higher prices.

1507. Did they strike at your limestone quarries, or at your granite quarries?—At the granite quarries at Dartmoor.

1508. About when was this?—We had made two or three supplies of granite on our contract before this took place.

1509. Was it in March?—I cannot say exactly.

1510. What was it you heard?—When I met the men, after describing the price Mr. Scott had got for his limestone, and the price we had got for the granite, they stated Mr. Scott had got 8¾*d.* for the limestone, and therefore he could afford to pay them a better price than I could.

1511. Did you make any further inquiries?—I was very much surprised then that Mr. Scott's price should be 8¾*d.*, when I had tendered for 8*d.*, and I told the men it was quite impossible; then I came to London after settling with the men, and the Admiralty sent up the contract for granite for me to sign; I went to Mr. James's office for the purpose of signing it on the Saturday afternoon.

1512. Did you send any letter to the Admiralty in which you made it a matter of complaint, that whereas you had made a tender for limestone at the price of 8*d.*, they had awarded the contract to Mr. Scott at the price of 8¾*d.*?—I did.

1513. When were you first officially informed that the price was 8¾*d.*?—I was not officially informed at all of it.

1514. When did you first learn from any official person, that Mr. Scott's price was not 8*d.* but 8¾*d.*?—I only learnt it by what I could collect from Mr. James; I did not learn it positive from him.

1515. Did you see Mr. James at his office?—Yes, he presented me the contract to sign for the granite; and he asked me to sign the specification, which contained the limestone condition as well as the granite condition; I said we had had a great deal of trouble from not paying attention to our signing the contract on the previous contract, and he must excuse me, and allow me to look over every word before I signed it. Mr. James said, "it is a very small contract, it is not worth while to be particular about it." I said, I must be particular, as I know Mr. Stuart is a very troublesome person, and will take any advantage he can. In consequence of that, I found it contained the condition of the limestone; I said, "it is very unfair to wish me to sign this, which I have nothing to do with; for I understand Mr. Scott is receiving 8¾*d.* for this contract, whereas I tendered for 8*d.*, and I said it was very unfair to ask me to sign the condition of the limestone contract, as I had nothing to do with it." He said it was a mistake in sending it up in that way, and he would erase the limestone condition; and he did. I said, "you had better write the other part over again, and let me only sign that which relates to the granite, and which I am bound to fulfil; I said some day or other, if questions should arise on it, it may be said, 'who scratched this out?'" Then Mr. James doubted whether my assertion was right or not; he said, "I do not think you are right in stating it is 8¾*d.*," and he went into the adjoining room, and after looking at some documents or papers, he came back and said, "I think I had better not say any thing more about it." That confirmed me in my opinion, that what the men had stated of 8¾*d.*, was the price he was receiving.

1516. Had the conduct of the Government in giving the limestone contract to

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Mr. Scott, any thing to do with your refusal to sign the contract for the granite?—I never did refuse to sign it.

1517. Have you signed it?—No; the Government would not allow me to sign it.

1518. Which Government?—I do not know.

1519. When you went to Somerset-house for the purpose of signing the contract, did you, or did you not, declare, that you would not sign the contract?—I never declared it. I declared I would not sign that part of the specification that did not refer to me.

1520. Then you did not intimate, that as you had not the contract for the two, you would not take the contract for the one?—Never; on the contrary.

1521. Did you make it a matter of complaint, that the advertisement was for the supply of granite and limestone, and that it was not fair to accept your tender for granite, which was the lowest, and not to accept your tender for limestone also; for that the Government ought to take the tenders for the granite and limestone together, and fairly estimate which of the tenders, for the two jointly, was the lowest?—That is precisely what I stated, as near as possible; I said the custom in other contracts was such.

1522. Then had the omission of the limestone from the contract which you were asked to sign, any thing to do with your objection to sign it?—Not the least.

1523. If the condition for the granite had appeared to you acceptable, would you have objected to sign the contract, on account of the omission of the limestone from it?—Not at all.

1524. You say you went to Somerset-house for the purpose of signing that contract?—I did.

1525. And when you arrived at Somerset-house, were you refused permission to sign it?—No; it was put before me, with the condition of the limestone in it, and I was told then, that this was put in in error; that drew from me the observation that it was a very proper specification, and that my tender ought to have been received for the limestone as well as the granite; and one ought not to be received without the other.

1526. Was the specification as to the limestone struck out?—It was in part.

1527. Why did you not sign the contract?—It was so very much obliterated by this being struck out, I thought it would become a public document. I did not know how troublesome the superintendent would be to me, as we had differences; and I wished it written out fair, and that nothing should be put into that, but what I was bound to fulfil.

1528. Then might you not, if you had chosen, have signed that contract?—Certainly.

1529. There was no refusal, on the part of the authorities at Somerset-house, to allow you to put your name to that document?—None.

1530. Were you the person who refused to sign the contract?—No; I never refused to sign the contract.

1531. To the document that was put before you, did you not refuse to put your hand?—Certainly.

1532. Are you executing the work?—Not now.

1533. What was the price at which you tendered for granite?—Eighteen-pence.

1534. Have you performed part of the contract?—We performed the contract to a certain extent.

1535. You delivered a certain small quantity of the granite?—Yes; as far as they wished it.

1536. The Government expected at the time that you would sign the contract, did they not?—Yes.

1537. In that case, what you delivered would have been in part of the contract?—Yes.

1538. Do you know at what price the contract for granite has actually been taken by Mr. Scott, subsequently?—I have only heard since I have been attending the Committee?—I understand 1*s.* 10½*d.*

1539. At the time when you put in your tender, on the 17th of February, was the dispute which you had with the Government respecting your former contract, and which had been referred to arbitration, settled, or was it open?—The arbitration was finally settled on the 3d of February.

1540. In the letter that you wrote to the Board of Admiralty, remonstrating as to their conduct in giving the limestone contract to Mr. Scott, there is an allegation

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tion that Mr. Stuart is in some way or other connected with Messrs. Scott in the limestone business: what authority have you for that allegation?—Before this contract was advertised, my clerk wrote up to me to say, "he begs to inform me, as we had large limestone quarries in the neighbourhood, that Messrs. Scott and Stuart had purchased the limestone quarries belonging to the late firm of Cotton & Co., bankrupts; and that he thought it would very much operate against our sale of limestone; and recommending me not to work so many as we had been in the habit of doing."

1541. Have you any authority for stating that, other than the letter which you received from your clerk?—No, no more than the current report of the place.

1542. What clerk gave you the information?—I think it was Mr. Philmer.

1543. Did he state the grounds of his opinion?—He did not; he gave me the first information he could, for my own guidance.

1544. Is that the utmost evidence that at present you can adduce on the matter?—Yes; I cannot say any thing further.

1545. Had not the Admiralty urged you repeatedly to execute the granite contract?—No further than that they wrote me a letter or two, to say they wished it executed. I replied, that as soon as I went down to Plymouth, I would execute it; but I would take care the work should not be impeded; that it should go on in the regular course.

1546. Was that before the interview at Somerset House, when you raised this question about the introduction of improper matter into it?—Yes, it was.

1547. Was it ever stated to you, whether or not your tender for the limestone had ever been before the Board of Admiralty?—I never heard; one could not have gone before the Admiralty, I presume, without the other; because it was all in one tender; it was that I complained of.

1548. In point of fact, have you signed the contract for the granite?—No.

1549. Was your only reason for not signing the contract, the state it was in as to obliteration, and so forth?—The only reason.

1550. As a man of business, do you think it was proper in the Admiralty to allow, several days after the 17th, an individual to put in a tender for the limestone, they having advertised the 17th of February as the day upon which those tenders were to be put in?—I should consider it very unfair, if any person had put in a tender, after the box had been opened. I consider the person in charge of the box in a very confidential situation; and I should think any person responsible, if he allowed a tender to be given in after the box had been opened.

1551. Why do you think it unfair?—Because some person, speaking of it, may give information of the prices tendered.

1552. Use may be made of the information contained in the tenders of the other parties, to enable the party who puts in his tender afterwards to make such an offer as will secure to him the contract?—Certainly.

1553. If such were the practice at the Admiralty, when contracts are to be taken, do you think it would deter tradesmen of respectable character from tendering at all?—I can say for myself, I never would tender under such circumstances.

1554. Are you quite certain there was no time mentioned in the advertisement in the newspaper?—As far as my recollection goes; and the circumstance of my taking it down to Mr. Dent, convinces me that there was none.

1555. Did you not produce the advertisement?—I did, at the time.

1556. Can you produce it now?—I am not certain; I will look among my papers.

1557. Why did you propose the erasure, from the contract for granite, of the words "or at the Breakwater?"—I knew if we tendered for delivering the stone at the Breakwater, that Mr. Stuart would be litigious enough to keep our vessels there for a day or two, or three days; and I was fearful of undertaking it so, at any price; for I know Mr. Stuart's disposition so well, that if he could throw difficulty in the way, he would do it.

1558. Had you agreed to deliver it at the Breakwater, would you have demanded a higher price for the stone?—That would depend on circumstances; if the despatch was given to us at the Breakwater that we ought to have, it would not be a higher price; I would as soon deliver it at the Breakwater as at the Catwater; we must ship it at all events.

1559. Do you know Mr. Pearse?—Only since he has been here.

1560. Do you know any thing about his circumstances?—I do not.

 1561. You

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1561. You are not able to say whether he is a person capable of fulfilling any contract he should enter into?—I know this, that I should say, looking at his quarries, he has as fair a chance as any person in the port.

1562. Do you understand his quarries are competent to give him the means of fulfilling a contract?—Yes; he would get the rest of the market with him, having the facility of his own quarry to prevent any stoppage to the works, which is the great object.

1563. Generally speaking, what are your political opinions, meaning merely, whether you were not quite as friendly to the late Government as Mr. Scott?—My politics are more Conservative than otherwise.

Captain *Ross*, again called in; and further Examined.

Captain *Ross.*

1564. YOU have stated, that it was not until after the 12th of March that you had any knowledge of the tender of Mr. Scott for the 60,000 cubic feet. It appears by the evidence of Mr. James, that as early as the 2d of March, he transmitted at least two tenders of Mr. Scott's to Plymouth, one of which was, the tender for 60,000 feet at 8*d.*?—I have stated I was in doubt about the exact time; it is probable he is correct.

Silas Pearse, again called in; and further Examined.

Silas Pearse.

1565. IS that block of limestone from your quarry?—It is the same that came in the box, and it came from my quarry.

1566. Is that a fair average sample of the limestone from your quarry?—It is.

1567. Are the samples of limestone you saw dressed at Mr. Stuart's office, more or less rudely dressed than that block?—Very like that.

1568. Did you attend yourself at Mr. Stuart's office, at Oreston?—Yes.

1569. Did you see it stated in the specification there exhibited, that the tenders were to be put in at so much per foot?—I consider so; there was a specification of the size, and so on, of the stones; and then there was a form of tender; and I fancy, in the form of tender it said at per ton. If I had not been certain in my mind at the time, I should have tendered at per foot. I tendered agreeably to 13 feet per ton.

1570. Was any information given you at Mr. Stuart's office, that, not 30,000, but 60,000 cubic feet of limestone would be wanted by the Government in the course of the year?—The first time of my hearing of that, is not three weeks back yet.

1571. Were you present in the Dock-yard, when Mr. Scott remonstrated on the subject of Johnson being allowed to put in a tender later than twelve o'clock?—I was not; I do not recollect hearing of any such conversation.

1572. Did you hear of any conversation, at which Mr. Scott or others were present, when they remonstrated, either with Captain Ross or with Mr. Dent, about the tenders being put in later than twelve o'clock?—No, not a word; the only conversation I heard, was respecting this—that we all then wondered why we did not know the result of the tender, as we were all to be in attendance, or our agents, at twelve o'clock.

1573. Have you a foreman of the name of Pinch?—I had then; but he is out of my employ now.

1574. Was he in your employ on the 17th of February?—Yes.

1575. In whose employ is he now?—He is doing a little for himself.

1576. Did you make any calculation, together with him, what was the lowest price at which you could afford to tender for the limestone?—I never allowed him to know the amount of my tender.

1577. But did you make any calculation, together with him, previous to the 17th, at how much it could be delivered; what it would cost?—I cannot say positively but what we might have made some calculation; but I never allowed him to know what I was going to tender at.

1578. From any thing that passed between you and him, had he the means of knowing, how much it would cost you per ton?—I think it is likely that we might have talked the thing over, how much it might cost quarrying, and how much it would cost dressing; but after all, I never allowed him to know any thing what I was about to tender at.

1579. How

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1579. How long was this before the 17th?—Perhaps two or three days, or a week; not more, I should think.

1580. When you went to Mr. Stuart's office, did you take the trouble carefully to read the schedule that was there, for the instruction of the parties intending to tender?—Yes; and Mr. Pinch went with me.

1581. And you now again re-assert, after having deliberately read that schedule, that the prescribed specification was by the ton, and not by the cubic foot?—I beg leave to say, that I fancied it was so. If I were put on my oath, I would not swear it was so, because I am not exactly sure; that is the impression on my mind, that it was so, otherwise I would not tender at per ton; be it as it may, I tendered agreeable to the 13 feet per ton; and I believe the specification would appear to be so, if it were before the House.

1582. Were the specification and the tender that you saw at Mr. Stuart's office, at Oreston, similar in form to these papers now produced?—No, they are not the size.

1583. Now look at them?—[*handing them to the Witness.*]—The only difference I see is, that my impression was, it was at per ton, and not per foot.

1584. Are you not certain about it?—No, I would not take an affidavit to it.

Mr. *John Phipps*, called in; and Examined.

Mr. John Phipps.

1585. ARE you connected with the Board of Works?—Yes.

[*The block of limestone produced by Mr. Pearse was delivered to Mr. Phipps to be weighed.*]

1586. Have you weighed the block of stone?—Yes, I have.

1587. What is the weight?—One hundred and sixty-four pounds.

1588. What are the dimensions of it?—11 $\frac{7}{8}$ in. × 11 $\frac{7}{8}$ in. × 12 $\frac{1}{8}$ in.

1589. Taking the block as a foot cube, how many feet would there be to the ton?—Rather more than 13 and 7/12ths.

1590. How much less is it than a foot cube?—It is about 1/95th less.

Veneris, 28° die Augusti, 1835.

HENRY WARBURTON, ESQUIRE, IN THE CHAIR.

Mr. *Edward Scott*, again called in; and further Examined.

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1591. IS there any explanation which you wish to make?—I wish to say a few words on the evidence which I have given. The agonized state of my mind, in consequence of exposing Mr. Dawson to such an unhappy (I was going to say) persecution (which is too strong a word) has been so great, that I scarcely know what to do with myself; and consequently I have almost forgotten every circumstance that did occur. As a proof, when I was examined last, and when the Committee was inquiring whether Mr. Stuart had any part of the quarry, although I had with me the attorney's bill of charges for the conveyance, yet I positively had forgotten that I had it in my possession, and did not produce it.

1592. What does that bill prove?—That Mr. Stuart had no portion of the quarry with me.

1593. Does it prove that the conveyance of the quarries was made to you?—To myself and Robert Scott alone.

1594. Was the quarry a leasehold property?—Yes, of Lord Morley's.

1595. How many years are there to run?—Twenty-five years.

1596. Is any portion of the produce paid as a royalty to Lord Morley?—No, it was purchased. I gave 6,300*l.* for it.

1597. Did you purchase it of Lord Morley?—No; Lord Morley sold it to Cotton and Kames. They became bankrupts, and I purchased it at their sale. A question was also asked me respecting Stuart being present at the completion of the purchase. Twelve months before I bought it, Mr. Stuart kindly attended

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the sale, to give his advice to me. The quarries were afterwards purchased, or agreed to be purchased, by another person, called Rowe, and he failed to fulfil the agreement of purchase. I wish to offer an explanation why I so early purchased limestone of Sparrow and Simons, in reference to the contract. In the first place, my quays were so loaded with limestone for manure, that I had not room to deposit the stone for the use of the Breakwater. The next reason was, I had lately purchased the quarries, and hardly knew the extent of sale. The third reason was, I asked Sparrow and Simons if they would take part of the contract with me, if I obtained it.

1598. When did you do that?—Before the contract was taken.

1599. Was that after the tender, and before you went to town?—Before I tendered at Plymouth, and before I came to town.

1600. Did you communicate with them again about it, after you had tendered at Plymouth, and before you went to town?—I believe not.

1601. Did they decline the offer of taking part of the contract?—No.

1602. Have you actually given them a portion of it?—Yes, at the same price; and since that, I have offered them another portion of it; and I suspect I shall be obliged to offer them to take some more.

1603. What leads you to think so?—One of the quays is so heavily laden with limestone for manure, that I fear I shall not be able to get clear of it this summer; and there is a great difficulty in raising the stones for the Breakwater.

1604. Do you consider the contract very advantageous?—Certainly not. I consider 8*d.* the cost price of the stone. I have also to explain: I have a confused idea that, in Mr. James's office, I either wrote a note to Mr. Dawson, recopying from the Plymouth tender, or partly wrote another, I do not know which.

1605. Do you mean to say that the first note you left for Mr. Dawson at the Admiralty, you believe you wrote at Mr. James's office?—Yes, I think so.

1606. Do you also mean that you re-copied the 8*d.* tender at Mr. James's office?—I have a very confused idea. I wrote something, whether it was a tender which I destroyed, or whether I re-copied the other, I cannot tell. I laboured very hard all night, and could scarcely sleep from endeavouring to recollect it.

1607. Have you this confused idea with respect to your writing a note requesting an interview, or with respect to the recopying of your tender?—Merely requesting an interview.

1608. You do not suppose you re-copied your tender, and sent it in to Mr. Dawson, do you?—No, I do not recollect. My own impression is, I never re-copied that.

1609. Your own impression is, that you did nothing more than write a note requesting the interview?—Yes.

1610. Look at your letter of the 18th of February, and see whether that will not help you, because the paper on which it is written, is totally different from the other papers on which your other tenders are made—[*The Witness examined the Letter.*]—Does that help your recollection as to the making a copy at Mr. James's office?—Not at all. The papers of the other two tenders are also different, the one from the other.

1611. Whether you copied it in Mr. James's office or not, have you brought to your mind any knowledge of the mode by which that 8*d.* tender was conveyed to the Admiralty?—Yes, I have. I myself gave it to one of the porters; and I think I can point out who it was.

1612. At the Admiralty?—Yes.

1613. When did you give it to one of the porters at the Admiralty?—The morning of my arrival, with the note to Mr. Dawson, requesting the interview.

1614. At what o'clock was that?—I think it must have been between ten and eleven.

1615. Was that before or after you had seen Mr. James and Mr. Taylor?—Afterwards, certainly; I fancy so; I am not distinctly clear about it; I think it was afterwards; I am quite sure it must have been.

1616. Was it before or after you had seen Sir James Cockburn?—Before, long before. I called at Sir James Cockburn's office, and he was not in town; and I I did not see him until two o'clock. Might I be allowed to state, that I do not think Mr. Dawson favoured me in the way in which he might fairly have done; because, in the first place, I conceive that my tender of 8¾*d.* ought to have been accepted; and, in the next place, as Messrs. Johnsons refused to sign their contract, I ought to have had it, being the next lowest tender.

1617. Do

1617. Do you mean to say, that you were the next lowest tenderer to Mr. Johnson, for granite?—I fancy so, from conversation with Johnson.

1618. Where had you that conversation?—At the Committee meeting of Mr. Parker, of Plymouth.

1619. When?—I do not recollect the day of the month.

1620. Before or after the day of the tenders?—Long after. The present Admiralty gave me (although I was not the lowest) the present tender for granite. Another gentleman offered a tender at 1*s.* 6*d.* a foot.

1621. Who was that?—Richards.

1622. What is he?—I do not know what he is. He has had something to do with the new Victualling Office.

1623. Has he any quarries?—No.

1624. Does he work any quarries?—Yes.

1625. Where?—At Parr, in Cornwall.

1626. Near to Penryn?—No.

1627. What part of Cornwall?—Near Lostwithiel.

1628. Where is it shipped?—At Parr.

1629. Have you been purchasing a part of the granite which you supply to the Breakwater, of Mr. Richards?—Yes.

1630. At 18*d.* a foot?—I do not know that I ought to tell the price.

1631. The question is asked you, do you purchase a part of the granite that you are supplying to the Breakwater, of Mr. Richards, at 18*d.* a foot?—I do not not know whether I ought to answer that question. The Government are paying me 4½*d.* a foot more than Mr. Richards offered to contract for; with this difference only, that he asked a Government vessel to carry it.

1632. In the tender of Richards that you have spoken of, at 18*d.* a foot, where was the granite to be delivered by him at that price?—On the Breakwater; but he asked Government to let him have a vessel. He wished a Government vessel to carry it to the Breakwater.

1633. Then the explanation of Mr. Richards's tender was this: he offered to supply it at 18*d.* a foot, but Government, at their own cost, were to find a vessel?—Yes; and that would make 1¾*d.* or 2*d.* a foot difference.

1634. How do you know this?—Mr. Richards himself told me so.

1635. Now when you mentioned to Mr. Dawson that Pearse's tender was 8*s.* 4*d.* a ton, how had you acquired that information?—I stated that Evea, my foreman, had seen Pearse's foreman, a man called Pinch; who had told him that he could not afford to contract for it for less than 8*s.* 4*d.* a ton.

1636. Had you obtained that information from any other source than Pinch?—Not before I came to town.

1637. Had you obtained any information with respect to the 8*s.* 4*d.* per ton after you came to town, and before you saw Mr. Dawson?—I think not.

1638. The question arises out of your answer "not before I came to town;" did you get information as to the 8*s.* 4*d.* from any other person than your own foreman?—I think not, except I mentioned the other day, that Mr. Dawson had conversation on the subject with me.

1639. And told you it was 8*s.* 4*d.*?—I think I commenced it to him. He asked me about how many feet went to the ton.

1640. How could you enter into any explanation with Mr. Dawson upon such a matter of detail, and point out to his attention that Mr. Pearse's offer at 8*s.* 4*d.* a ton was, if properly reduced to feet, higher than yours, unless you had at the time some precise information that Mr. Pearse's tender was 8*s.* 4*d.* a ton?—I believed it to be 8*s.* 4*d.*, from the information I had received; and calculated accordingly.

1641. Was any information given you, during your second visit to the Admiralty, that what you had heard as to Pearse's tender being 8*s.* 4*d.* a ton was correct?—I do not remember.

1642. Did you not just now say, that Mr. Dawson put to you some questions as to the mode of reducing the ton to feet?—He asked me how many feet went to the ton.

1643. Did he explain to you what was his motive for asking that question?—I think not.

1644. Did you not also enter into conversation with him, respecting Pearse's tender being at so much per ton?—I do not remember his mentioning Pearse's tender being so much per ton; I remember his asking some questions about Pearse.

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1645. Did you not enter into conversation with him about Pearse's tender being so much per ton?—I did.

1646. When you pointed out to him that Pearse's tender was at so much per ton, did he assent to it, or did he deny it?—I really cannot remember whether he made any observation about it.

1647. Did you collect, during your interview with Mr. Dawson, that your information as to Pearse's tender being at 8*s.* 4*d.* a ton, was correct?—I really cannot recollect.

1648. Did you hear any thing, or was any paper shown you, during that interview with Mr. Dawson, that led you to believe that your information as to Pearse's. tender about 8*s.* 4*d.* a ton was correct?—I think so.

1649. Then what was it?—I really cannot recollect what it was.

1650. Were the tenders sent for?—Yes; I stated that the other day.

1651. Among those papers did you see Pearse's tender at 8*s.* 4*d.*, or was any statement founded on that paper shown you, in which it was stated that his tender was 8*s.* 4*d.* a ton?—I saw Mr. Dawson with papers in his hand.

1652. Was Mr. Taylor, the civil architect, called in, while you were there?—I do not remember.

1653. Did Mr. Dawson show you Pearse's tender?—Certainly not.

1654. Did he read it to you?—Certainly not.

1655. Did he inform you what that tender was?—I think not.

1656. Did you see any comparative statement like this, while you were there—[*handing Mr. Taylor's Abstract of the Tenders*]?—I think I saw that at a distance.

1657. What do you mean by "at a distance?"—In Mr. Dawson's hand.

1658. Was it shown to you?—I do not think it was shown me.

1659. Did you see it close enough, to read any part of it?—I think I saw the 7*d*; I have some idea that I did.—[*The witness referred to the 7d. on the Abstract, written under the 8s. 4d. a ton, and in the column referring to Pearse.*]

1660. What was the nature of the acquaintance you had with Mr. Dawson at Plymouth: what opportunity had you of coming in contact with Mr. Dawson during his visit to Devonport?—I frequently met him.

1661. How frequently?—Several of my friends were intimate with him, and wrote to me to call on Mr. Dawson.

1662. While he was at Devonport?—Yes.

1663. Do you mean as a political supporter?—No; one gentleman said he was a particular friend of his, and wished me, if I could, to show him any attention.

1664. How frequently were you in his company, when he was at Devonport?—I am sure I cannot tell. I have very frequently been in his company. I dined with him at several private houses.

1665. Should you have expected, if you had met Mr. Dawson in the street, that he would have recognized you, as a person that he had met before?—Certainly.

1666. On your being ushered into his presence at the Admiralty, did he meet you as a person whom he had not seen before; or did he recognize you as a person whom he had met before?—Certainly, as a friend.

1667. When you called on Mr. Dawson, at Plymouth, did you call for the purpose of tendering your assistance to promote his election?—I think the first letter was merely a letter of introduction to him.

1668. At any period during Mr. Dawson's stay at Devonport, did you see him for the purpose of proffering your aid to forward his election?—I do not know that I am bound to answer questions of that kind.

1669. Yes, you must answer that question?—I certainly offered him my support, and voted for him.

1670. Did you canvass for him?—Very slightly; I was so occupied with the Plymouth election, I had not time; I wished I had been able to do so.

1671. But was your chief exertion made at the Plymouth election?—Yes.

1672. Is Mr. Stuart, or at any time has Mr. Stuart, been in partnership with you; or had money invested in your brewery concerns at Plymouth?—Never.

1673. Nor in any other concern jointly with you or your brother?—No; I ought to say, Mr. Stuart and I had been intimate for 18 or 20 years. When I bought the quarries, I wrote him a note to offer him any portion of it. He at once said, he considered it incompatible for him to be concerned in any trade, while employed under Government. I would just make another observation. So conscious was I that Mr. Stuart had nothing whatever to do with the quarries, that I actually wrote a letter

a letter to him, to beg he would apply to the Admiralty to permit him occasionally, as he passed that way, to give some advice respecting the blowing stones. Mr. *Edward Scott.* 28 August 1835.

1674. What is your business at Plymouth?—A brewer.

1675. You are not a Government contractor at all?—Except in this Breakwater.

1676. Was this the first Government contract you ever had?—No.

1677. Had Mr. Dawson an opportunity of knowing you in any way, as a Government contractor?—I am not aware.

1678. What other contract had you?—I had a contract twice before, for the supplying of beer to the navy.

1679. Did Mr. Dawson know you were at all connected with quarries?—No; it was impossible he could know it.

1680. He only knew you as a large brewer?—That is all.

1681. What is your christian name?—Edward.

1682. When he saw the tender of Edward Scott, he would not necessarily know it was Mr. Scott, the brewer, whom he had known at Plymouth?—I think not; indeed I felt very much annoyed at being kept waiting at the Admiralty; I wrote him a very urgent note, and requested to see him immediately; I think I waited more than two hours—between two and three hours—without seeing him; that induced me to go to Sir James Cockburn, thinking that Mr. Dawson would not see me, as he did not know what Scott it was.

1683. Did you keep a copy of the urgent note you addressed to him?—No.

1684. When Mr. Dawson received the tender of Edward Scott for limestone, would he be able to recognize his friend, Mr. Edward Scott, the brewer, of Plymouth, as the same person?—I should think not.

1685. You say, you frequently dined in company with Mr. Dawson?—Yes.

1686. In large or small companies?—Large.

1687. You saw him frequently; do you mean you saw him in the street?—Yes.

1688. Did he on every occasion recognize you, and speak to you?—I think so; after the third or fourth time that I had seen him, I think he must. Perhaps I ought to state, as the reason for the infirmity of my memory, that I have had three accidents; the first a fall from a jump from the gangway into the waist of a line of battle ship, on which occasion I ruptured a blood-vessel, and was reported for dead several times. On the second occasion, a yard-arm of a ship struck me on the back of my head, and carried me across the quarter deck, and across the skylight, when I was picked up senseless; and the third was, my horse fell with me, and I was picked up senseless on the road; and therefore, when any particular pressure of mind is required, I find a deficiency of memory, and am very nervous.

1689. Previously to your interview with Mr. Dawson at the Admiralty, you had written him a note?—Yes.

1690. Do you recollect whether you stated any thing which should call you to his recollection; did you state you came from Plymouth?—No.

1691. When you saw him, you went in with Sir James Cockburn?—Yes.

1692. And therefore Mr. Dawson would know that Mr. Edward Scott, the brewer, was Mr. Edward Scott, the tenderer?—Yes.

Mr. *George Leadwell Taylor*, again called in; and further Examined.

1693. THE 25th of February is the date of the Admiralty Minute, ordering Captain Ross to be informed that the contract for limestone was to be given to Mr. Scott?—Yes. Mr. *G. L. Taylor.*

1694. Was that a Board day?—Yes, it was Wednesday.

1695. Were you present at the Board?—No; I was not present when that was done; I was at the Board that day probably.

1696. As you went to the Board, can you say what Lords were present at the time you attended?—I cannot remember that.

1697. Were you there on the Board day of the 20th?—On the 20th I was there; I do not think I saw the papers again.

1698. Were you there when your abstract was read?—Yes.

1699. When was the abstract made?—On the 20th.

1700. Were you present at the Board on the 20th, when your abstract of the tenders was read?—Yes.

1701. Look at that letter of the 18th of February—[*handed to the Witness*]—was that read at the Board, to your knowledge, when your abstract was read?—I should think

Mr. *G. L. Taylor.*

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think it was; and I think it led to the remark of Mr. Dawson, in the corner of my abstract, about the 8*d.*

1702. At the time this abstract was read at the Board, was that handwriting of Mr. Dawson's upon it?—No.

1703. Was that letter of the 18th February, if it was read there at all, read before, or after the abstract had been read?—It was read after the abstract had been delivered in. My impression is—though it certainly is not so strong, that I could swear it—I believe—that Mr. Scott brought me that letter on the day of the 20th. It did not occur to me before, until the Committee were so particular about it the other day; and I have been thinking about it since. He said, that Mr. James had referred him to me, and informed him, that I could give him information about the contract, probably. He stated that his brother, or some person, had been too late in delivering in a tender at Plymouth; and asked if it could be received; I was at the moment called in to the Board, and took the letter in my hand; I informed him, I could not tell him that, but I would take the letter up; which I did, and gave it to Mr. Dawson.

1704. You not having opened it yourself?—No;—that I believe to be the fact—it did not occur to me before—it was only in consequence of the remarks the other day, that I have taxed my memory very strongly since, and that I believe to be the fact.

1705. Was that a letter requesting an interview, or the letter containing the tender?—It was the letter of the 18th of February.

1706. About what time of the day was that?—It was between one and half past one.

1707. Was that during the sitting of the Board?—Yes; about the time I am generally called up.

1708. Do you recollect, after your abstract was read, how that letter was introduced to the Board?—No; I never saw any thing of the papers after.

1709. You were present when the abstract was read?—Yes.

1710. After that abstract was read, do you recollect how the letter of the 18th of February was introduced to the notice of the Board?—No; I do not know what was done with it.

1711. Was it read on that day?—Yes; it was brought out directly by Mr. Dawson; and what the Board decided, I never knew—I was not informed what was done with it.

1712. What passed then?—It was opened; but what was done with it I do not know; I am particular in stating that I think this took place on the 20th of February, because I did not see the papers afterwards, until lately.

1713. After that letter was read at the Board, were you asked at the Board any question with reference to that tender; which, of course, did not appear to be noticed in your abstract?—Nothing particular.

1714. Were you asked whether that new tender of 8*d.* made any difference in your report?—No; I said, "here is a person has brought another tender," and gave it to Mr. Dawson.

1715. Where was it put into your hand?—In my office below; in the room I sit in, below.

1716. Was that at the Admiralty?—Yes; in the library below, where I usually sit.

Mr. *Hugh Ross,* called in; and Examined.

Mr. *Hugh Ross.*

1717. ARE you a clerk in Mr. Mackintosh's office?—Yes.

1718. Did you attend at Mr. Stuart's office at Oreston, to examine the samples of stone, and the form of tender and specification, shortly before the time of making the tenders for stone, in February last?—Yes.

1719. Was any explanation given to you at the time of your visit to Mr. Stuart's office, of its being probable that a larger quantity of limestone than the 30,000 feet, somewhere about 60,000 feet, would be wanted in the course of that year?—No.

1720. From the time that you saw the samples at Mr. Stuart's office, did you stay at Plymouth until after the 17th of February?—Yes.

1721. Some days after?—A considerable time.

1722. On the day of the tenders being made, or during some days after, did you learn that 60,000, and not 30,000, cubic feet of limestone was the quantity which would be wanted?—No, I never heard of it.

1723. Had

1723. Had you not heard in general conversation, that it was likely 60,000 feet would be wanted?—Never, until I saw the report of the Chairman's speech in the House.

Mr. *Hugh Ross.*
28 August 1835

Mr. Bonham, a Member of the Committee, stated that he had this morning received a letter from Mr. Dawson, dated the 24th of August 1835.

Lunæ, 31° *die Augusti*, 1835.

HENRY WARBURTON, ESQUIRE, IN THE CHAIR.

Mr. *Andrew Wilson*, called in; and Examined.

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1724. ARE you agent for the Duke of Bedford's estates at Plymouth?—Yes.

1725. Are the Oreston quarries under your charge?—They are under my care and direction.

1726. How long has Mr. Silas Pearse been a tenant of the Duke for the Oreston quarry?—Since 1830.

1727. Explain the nature of Mr. Pearse's tenure of that quarry?—He holds it on a lease for twenty-one years, from Michaelmas 1830.

1728. What payment is he liable to make to the Duke?—A due of one-seventeenth.

1729. Is the seventeenth payable in money, or in material?—In money.

1730. How do you calculate the seventeenth?—The seventeenth of the produce.

1731. How do you estimate the produce, in money?—If he sells to the amount of 1,700*l.*, 100*l.* belongs to the Duke.

1732. Is he bound to produce an account of what he sells, in order that his Grace may know what the seventeenth amounts to?—Yes.

1733. In the case of wrought limestone for masonry, on which, of course, more labour has been expended than on the rough limestone for manure, what portion, in that case, is his Grace entitled to?—The same portion precisely, in whatever mode it is sold; no matter whether it is cut stone, or rough stone.

1734. Is his Grace entitled to one-seventeenth of whatever the stone sells for?—Yes; and Pearse is subject to showing the books when called upon.

1735. Are the whole of the quarries that Pearse works, his Grace's property?—The whole are his Grace's property; the surface of the quarries belongs to Mr. Pearse, he holds that in fee-farm; but the mineral below the surface is the Duke's.

1736. So that the absolute property of the mineral in the quarry will revert to his Grace at the expiration of this term of twenty-one years?—Yes, Mr. Pearse holds it for twenty-one years, and at that time his term expires.

1737. Has he a right of renewal on any specific conditions?—Not unless the Duke is inclined to give a renewal; he cannot demand it.

1738. Then, when the quarry is worked out, does the surface revert to Mr. Pearse in fee-farm?—He takes the surface.

1739. What estimate would you make of the value of those quarries to Mr. Pearse?—Does the question refer to the annual value?

1740. Take the annual value first; state what the produce has been from the beginning of his term in 1830 up to this time?—He has worked a very considerable quantity of stone; but I am sorry to say that I really do not know what quantity he has worked; for he has been very irregular in delivering his accounts.

1741. You cannot say what the annual value has been?—No, I cannot say for a certainty, because I have no document; and I have not been able to get any account from him; I have pressed him very hard for the return frequently, and he has always promised to let me have a return, but I never have got it.

1742. What rent has he paid to his Grace?—He has not paid one shilling, from the time he commenced up to this period.

1743. Do you mean that, from 1830 to the present time, he has not paid any portion of what is due to his Grace?—He has not paid any portion.

1744. As to lime that is burnt from the limestone, is his Grace entitled to one-seventeenth of the value of the lime, or of the value of the limestone only?—The

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value of the limestone; whatever sum it amounts to, the Duke is entitled to one-seventeenth of it.

1745. Supposing Pearse burns a portion of the limestone into lime, and receives the value for the lime; how is the value of the limestone estimated?—It must be valued in stone; lime is out of the question; we must know what it is, as to its value in stone.

1746. At any other limestone quarries near Plymouth, that may belong to his Grace, at what price are you accustomed to value the limestone?—We generally receive it annually.

1747. How much money per ton of limestone do you receive?—It perhaps might sell for ten-pence a ton, or a shilling a ton; the prices are fluctuating.

1748. What is the average price of the last three or four years?—It may be about eleven-pence a ton.

1749. Is that limestone for manure?—Yes, and I have sold it at fifteen-pence a ton.

1750. Was fifteen-pence the price of stone which is wrought for building purposes?—There is very little of that.

1751. So that you scarcely take the wrought limestone into consideration?—If it were sold for building stone, it would be on the same principle; so much, according to the weight.

1752. And would you include the value of the labour expended in squaring it?—Whatever labour Mr. Pearse, or any other person, puts on the stone, we have nothing to do with; it is the sum which he sells it at, to which we look.

1753. Suppose he were to square the stone as completely as that block is squared, and were to sell it to the navy for building purposes; would you estimate the value, in order to assess his Grace's dues, at what Pearse sold it for in the wrought state?—Yes, we would take a seventeenth of whatever it sold for, according to the quantity that was sold.

1754. As Mr. Pearse has been so irregular in his payments, could his Grace, at any time he pleases, consider the lease as forfeited?—We could enter on the quarry at any time, if we could prove that he has been irregular, or has not fulfilled his contract; and we could bring an action against him, to recover whatever may be due upon it.

1755. Can you resume possession of the quarry at any time you please?—I hold in my hand the lease between his Grace and Mr. Pearse; it is dated the day of 1830, and it witnesses that his Grace had granted in fee farm, on the 25th of May 1750, to a person of the name of Elias Long, twenty-five acres of land at Oreston; and then says, "Whereas Silas Pearse is now legally possessed of the land, &c., described in and conveyed by the before recited indenture, and it has been agreed between him and the said John Duke of Bedford, that he, the said Silas Pearse, his, &c., shall have liberty to search for, raise and dispose of, the limestone and other minerals, and all metals lying or being on or under the said lands, &c., for the term of years, and under the terms and conditions hereinafter mentioned: It is by the said indenture witnessed, that the said John Duke of Bedford hath given and granted, &c., unto the said Silas Pearse, his, &c., full and free liberty, &c., to dig, &c., and to take and carry away from time to time, and at all times during the term of twenty-one years, all limestone and all other minerals, and all metals whatsoever, already found and discovered, or which may hereafter, during the continuance of the said term of twenty-one years, be found and discovered in or under the lands, &c., comprised in and conveyed by the said indenture of the 25th of December 1750, or any part or parts thereof; to hold, &c., from the 29th day of September next ensuing, for and during the term of twenty-one years from thence next ensuing, and fully to be complete and ended; he the said Silas Pearse, his, &c., yielding and paying unto the said Duke, his, &c., on the 25th day of March in each and every year during the continuance of the said term of twenty-one years, one-seventeenth part, the whole into seventeen equal parts to be divided, of all and every sum and sums of money for which the limestone, minerals and metals which shall be dug, &c., by virtue of these presents, shall have been sold or disposed of by the said Silas Pearse, his, &c., during the half year preceding such 25th day of March, or of the value of all limestone, minerals and metals which shall be so dug, &c., during such half year, at the election and choice of the said Duke, his heirs, &c., free and clear of all costs, charges, expenses and deductions whatsoever; and also yielding and paying unto the said Duke, his heirs, &c., on the 29th day of September in each and every year during the

the said term of twenty-one years, one-seventeenth part, the whole into seventeen equal parts to be divided, of all and every sum and sums of money for which the limestone, minerals and metals, which shall be dug, &c., by virtue of these presents, shall have been sold or disposed of by the said Silas Pearse, his executors, &c., during the half year preceding such 29th day of September; or of the value of all limestone, minerals and metals which shall be so dug, &c., during such half year, at the election and choice of the said Duke, his heirs, &c., free and clear of all costs, charges, expenses and deductions whatsoever." Then there is a covenant from the said Silas Pearse to pay all rates and taxes; "and also that he, the said Silas Pearse, his executors, &c., shall and will from and after the commencement of the said term of twenty-one years, carry on, work and prosecute, the several quarries, mines or lodes, to be worked by virtue of these presents, with a competent number of workmen, and in a proper, skilful and workmanlike manner, and according to the usual course and practice of carrying on and working such mines with effect; and also that he, the said Silas Pearse, his executors, &c., shall and will from time to time, and at all times hereafter, during the said term of twenty-one years, keep accurate and regular books of account, in which he or they shall make, or cause to be made, true, plain and perfect entries of all such limestone, minerals and metals, as shall be raised and gotten by virtue of these presents; and of all such limestone, minerals and metals, as shall be sold or otherwise disposed of; and of all such monies as shall be received by the said Silas Pearse, his executors, &c., in respect thereof; and that they will produce and show to the said Duke, his heirs or assigns, or to his or their stewards, agents or tollers, for the time being, at his or their request, all and every such books and book of account, and all other books, papers and accounts, relating to or in anywise concerning the expenses, costs and charges, attending the management and working of the several quarries, mines or lodes, so hereby authorized and covenanted to be worked as aforesaid; and the return, produce, sale and profits of the limestone, minerals and metals that shall be dug, raised and gotten therein; and that the said Duke, his heirs or assigns, or his or their stewards, agents or tollers, shall at all times have liberty and power to make copies, and take extracts from the said books, papers and accounts, at his and their free-will and pleasure; and also that he the said Silas Pearse, his executors, &c. shall and will, on the 25th of March and on the 29th of September in each year during the said term of 21 years, make or cause to be made a full, true, just and fair account and rest, in writing, of all the limestone, minerals and metals, raised or gotten from and out of the lands and premises hereinbefore mentioned or referred to, or the quarries, mines, or lodes to be worked by virtue of these presents; and of all limestone, minerals and metals sold, or otherwise disposed of, and of all the monies received by the said Silas Pearse, his executors, &c. on account thereof during the last preceding half year, so that the quantities raised or gotten, and the quantities sold, or otherwise disposed of, and the amount of the money received by the said Silas Pearse, his executors, &c. in respect of the limestone, &c. so raised or gotten, or so sold, or otherwise disposed of, in such preceding half-year, may from time to time plainly appear; and also that it shall and may be lawful for the steward or agent of the said John Duke of Bedford, party hereto, or any other person or persons authorized or employed by him or them, from time to time, and at any time or times during the said term of 21 years, to enter and come into and upon the lands and premises hereinbefore described or referred to, and the quarries and mines to be opened in or under the same, by virtue of the powers herein contained, and every wharf, quay, or other place, where any part of the limestone, minerals and metals, to be raised and gotten by virtue of these presents, shall or may, at any time or times during the continuance of the said term, be placed or lodged, for the purpose of taking an account of such limestone, minerals and metals; and that the said Silas Pearse, his executors, &c., and his and their foreman, labourers and others employed by him or them, shall and will from time to time, aid and assist the said steward or agent of the said John Duke of Bedford, or other the person or persons authorized or employed by him or them in taking such account, whenever the said Silas Pearse, his executors, &c. or his or their foreman, labourers, or others employed by him or them, shall be required by the said steward or agent, or other person or persons aforesaid, so to do." Then there is covenant by the said Silas Pearse, &c. not to alienate the property: "Provided always, and it is hereby agreed and declared, and these presents are upon this express condition, that if the said Silas Pearse, his executors, &c., or

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any of them, shall at any time hereafter during the said term of 21 years neglect or refuse, or omit to pay unto the said Duke, his heirs, &c. the said hereby royalties or sums of money, or any of them, or any part thereof respectively, according to the true intent and meaning of these presents, and shall fail or make default in the performance of all or any or either of the covenants and agreements hereinbefore on their parts contained, then and in any or either of the said cases, and thenceforth immediately upon and after any such failure or default, all and every the powers, authorities and privileges hereby granted to the said Silas Pearse, his executors, administrators and assigns, and the said term of 21 years shall cease and determine, in the same manner in all respects as if the same had expired by effluxion of time, without prejudice nevertheless to all such remedies by action for breach of covenant, or otherwise, as the said Duke, his heirs or assigns, shall or may have, or be entitled to, under or by virtue of any covenant, clause, proviso or agreement contained in these presents hereinbefore contained, to the contrary notwithstanding."

1756. Do you mean to say Mr. Pearse has delivered in no accounts whatever?—No, he has not.

1757. Not even imperfect accounts?—No, not even the most imperfect; none whatever, in fact.

1758. Has Mr. Pearse laid out about 3,000*l.* on the quarries?—Very likely he may have expended 3,000*l.*; but then there has been a large return from the quarries.

1759. Has he laid out 3,000*l.* in improving the quarries, in clearing away the rubbish, and making a wharf or jetty to deliver stone from?—I should not think he has.

1760. Have you ever examined the quarries, with a view to ascertain what sum he may have expended on their improvement?—He stated to me, about twelve months after the commencement of the quarries, when I pressed him to let me have an account, that he had been to very considerable expense in opening the quarries; I told him then, if he would let me have an account, I would view the quarries; and if he was entitled to any thing, I would give it him; but I have never had it in my power to do so, or to make any arrangement whatever, because I have had no return of what he has done.

1761. Is there not a condition, that a regular account shall be kept?—Yes, there is a clause to that effect.

1762. Have you ever delivered notice to Mr. Pearse, in consequence of his not producing the accounts?—No regular notice, further than requesting he would let me see the accounts; and he has promised from time to time to let me have them; he has never said he would not do it.

1763. Can you make any guess as to what the amount is that may be due to his Grace, on account of this seventeenth?—I have no mode of checking it, but by his own account. He was to leave his accounts open at all times, when myself, or any person belonging to the Duke, might look into them.

1764. Has his Grace any other tenant at or near Plymouth, for limestone quarries of the same description?—Yes.

1765. How frequently is his Grace in the habit of requiring any such other tenant to produce his account?—Not very often; perhaps two, three or four times in the year; there is a person we have at Plymstock, whom I desire occasionally to look into the account, to see how it stands, and to let me know what quantity of stone has been shipped.

1766. You have a person on the spot to give you information respecting that other tenant, what quantity of limestone appears from time to time to be shipped, as a check on the account?—Yes.

1767. Have you taken the same precaution in the case of Mr. Pearse?—No, I have not had an opportunity; he has never tendered his book.

1768. But in the case of the other tenant, you did not refer to the person on the spot examining the books of account; but merely to his observing from time to time what quantity of limestone was being shipped?—He runs through the book, to see what quantity is shipped from time to time.

1769. If you were to give regular notice to Pearse to produce his books, have you any doubt you should obtain them?—Of course he is bound to do it.

1770. And he has never refused to do it?—No; I think I have shown him too much lenity, and, on the other hand, he has taken too much liberty.

1771. You have never given him regular notice, and he has never regularly refused

Mr *A. Wilson.*

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refused to produce the books?—I have gone no further than requesting him to do it, telling him, that if he did not, I must take the quarry out of his hands.

1772. You have frequently requested him to produce his accounts?—Yes.

1773. And has he a copy of that agreement?—Yes, it is a regular lease.

1774. Then is he not bound to know that it is his duty to give in those accounts annually?—He must know that.

1775. He has been the tenant of his Grace for five years?—No, because for some months, at the commencement, there was very little done; there has not been a great deal done except during the last four years.

1776. But during the last four years, he has neither sent in an account, nor paid the dues to his Grace?—He has not paid a shilling.

1777. What permanent improvement has been made at the quarry; is there a brick or stone wharf built?—There is a face of stone; the quay is built with stone.

1778. Of what length do you suppose the quay is?—It is not of very great extent.

1779. As long as this room?—A good deal more than that.

1780. Did he not build a jetty, respecting which he had some dispute with the navy, on account of its projecting too much?—There was nothing stated to me of that sort; I never heard of any difficulty about it; the improvement was to admit of the barges coming up to be loaded.

1781. Do you suppose that he has had a considerable sale for limestone?—Yes, he has had a very large sale, a very considerable sale.

1782. Can you estimate at all the quantity?—I am afraid to say the quantity, as it would be mere supposition; there is a very large body of rock wrought away; I cannot say how many thousand ton there may have been quarried.

1783. Does it lie near the water?—Yes, very convenient for shipping; it is a very convenient quarry.

1784. What is the value of a ton of limestone put on board?—The prices are fluctuating.

1785. Is 11*d.* a ton the price for it in the quarry, or the price when put on board?—The purchaser pays that price, who sends his own ship for it; it is delivered on board at from 11*d.* to 1*s.* 3*d.*

1786. Who puts it on board?—I believe the quarrier.

1787. Have you had any other transaction with Mr. Pearse?—He rents a small farm.

1788. At Oreston?—Yes, of the Duke of Bedford.

1789. Is he regular in the payment of his rent?—He has not been.

1790. Is he much in arrear?—He was, until about a fortnight ago; he was about three years in arrear.

1791. Has he paid it off?—He paid up to Lady-day last, within a few pounds prior to that he was three years in arrear.

1792. What sized farm is it?—Only a small farm; about 40*l.* a year.

Martis, 1° die Septembris, 1835.

HENRY WARBURTON, ESQUIRE, IN THE CHAIR.

John Martin Sweet, called in; and Examined.

John Martin Sweet.

1 September 1835.

1793-4. ARE you a sheriff's officer at Plymouth?—Yes.

1795. Are you acquainted with Mr. Silas Pearse?—I know him very well.

1796. Have you known him in the way of business?—Yes.

1797. Have you arrested him a considerable number of times lately?—I have arrested him, altogether, about six or seven times.

1798. Since when?—The first arrest took place in 1833, the latter arrests in 1834 and 1835.

1799. When was the last arrest?—The last was in April.

1800. Was there not an execution on Mr. Pearse's premises in February last?—Not in February; he was arrested in February.

John Martin Sweet.

1 September 1835.

1801. Had you ever an execution in his house?—I have had.

1802. When?—I think the latter part of last year.

1803. How long did that execution remain in his house?—I think it was in about six days.

1804. For what sum was that execution levied?—For 100*l.* and upwards.

1805. Was it a judgment debt?—Yes, it was.

1806. Did you arrest him in February last?—Yes, I did.

1807. For what sum?—He was arrested at the suit of a person called Karenot, of London, for 30*l.* in February.

1808. Was he arrested in March?—He was not arrested in March, but he was in April.

1809. For what sum, and at whose suit?—That was at the suit of Harper, for 76*l.* 5*s.* 1*d.*

1810. Since April, have you arrested him?—He was arrested in May.

1811. At whose suit?—At the suit of Benjamin Sampson.

1812. For what sum?—For 64*l.* 13*s.*

1813. Has he been arrested since May?—He has not been arrested since by me. There is another officer at Devonport; but I believe he has never had occasion to call on Pearse.

1814. What knowledge have you generally of Pearse's circumstances?—I have had none, because he has always paid me the debts and costs, within a very short time after he has been arrested; with the exception of one case.

1815. Take the debt of 30*l.* in February, the debt of 76*l.* 5*s.* 1*d.* in April, and the debt of 64*l.* in May, and in each case state how soon after the arrest the debt and costs were paid?—They were generally paid the next day.

1816. In the case of the judgment debt of 1834, for about 100*l.*, how long did the execution remain in the house, before the debt was paid?—I think it was six days; I cannot speak positively, but I believe it to be so.

1817. Then there is no sum for which you were directed to arrest him, or to take his goods in execution, that he has not settled?—He has settled each of the debts for which I arrested him, and he has since paid the sum for which his goods were taken in execution. In one of the arrests it was not all his own debt.

1818. Which case was that?—It was the case in which the amount was 100*l.* 13*s.*

1819. Is that another debt which you had not before stated?—Yes.

1820. What was the date of that arrest for 100*l.* 13*s.*?—That was in July last.

1821. What have you to say respecting that?—He said that only one-half of the amount belonged to him; one quarter belonged to a person called Riparth, and another quarter belonged to a man named Barnes, and from whom I received their portions. That was respecting the ship Marian, of which he was ship's husband.

1822. Are you the sheriff's officer?—I am the only one at Plymouth.

1823. Did you arrest him at the suit of Messieurs Allen & Son?—I did; it is Allen, Sampson & Company.

1824. What was that sum for?—For 64*l.* 13*s.*

1825. Did you ever arrest him at the suit of Mr. Saunders?—I arrested him in a case, where Mr. Saunders was the agent.

1826. What was that sum for?—Seventy-six pounds, five shillings and one penny.

1827. Do you know Mr. Saunders, a sail-maker, at Catdown?—I do not.

1828. You did not arrest him for 20*l.* 11*s.*?—He was arrested, I believe, at that suit by the other officer; that was the only suit against him that the other officer had got.

1829. Did you arrest him at the suit of Mr. Barnes?—Mr. Barnes was one of the parties who was implicated in the Marian.

1830. Did you ever arrest him at the suit of Yolland, Lord Morley's steward?—No.

1831. Altogether, within the last year or so, how often have you arrested Pearse?—I have arrested him seven times altogether.

1832. You say he generally paid the next day; but is there not a considerable expense attending these arrests?—There is an expense attached to them.

1833. How do you account for his being so frequently arrested, and always paying the next day?—He has told me that he has been pressed for the time, and was not able to meet the bills as they became due.

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1834. Does not that raise a suspicion, that he pays one bill by drawing another?—That I cannot say.

1835. What was the day in February on which you arrested him?—On the first.

1836. And on what day was that bill paid?—The day after.

1837. Was that for the sum of 30*l.*?—Yes.

1838. Did you happen to meet Mr. Pearse lately at Mrs. Arlis's shop?—He came in to Mrs. Arlis's shop the week before last.

1839. Had he any conversation with you relating to this inquiry?—He did not name the inquiry to me, when he came in.

1840. Give the substance of the conversation?—He came in, and asked me what I had done by Ryder, against whom I had a writ at Pearse's suit. I told him that Ryder had given me bail, and I had nothing further to do with him. He then says, "If any question should be asked of you with regard to any transaction between you and me, you know nothing of it." I said, "Very well; what do you mean by it?" He then put his hand in his pocket, and he took out a letter that he had received from the Chairman of this Committee; and he says, "I am going to town to-morrow morning." With that he left; that was the whole of the conversation that took place.

1841. Are you confident that in what he said, he alluded to any question that might be asked of you by this Committee; or did he mean that you should not make it known that you had arrested Ryder, for fear of injuring Ryder's credit?—I do not know what he meant.

1842. Had Mr. Ryder any connexion with this Committee, or with the Chairman?—No.

1843. He asked you what you knew about Ryder?—He asked me what had been done.

1844. Was it before or after that question respecting Ryder, that he took out from his pocket the letter from the Chairman of this Committee?—Afterwards.

1845. And was it after showing you the letter from the Chairman, that he said to you, "that if any questions were asked you concerning him, that you were to say nothing about it?"—Before.

1846. Before what?—Before I saw the letter.

1847. Then it was not until after he had given you the caution, that if any question was asked you, that you were to say nothing about it, that he showed you that letter?—It was before he showed me the letter, that he stated that.

1848. Did you put the question to him "what do you mean?"—Yes, I did.

1849. And upon this, he took a letter out of his pocket and showed it to you?—No; he said he was going to town; and I asked him for what purpose; and then, I think, he stated (but I am not positive) that it was to come to the Committee.

1850. Do you know Mr. Beer, of Devonport?—Yes.

1851. Did you not arrest him at the suit of Mr. Beer, of Devonport?—No.

1852. Do you know Mr. James Cuddiford?—Yes.

1853. Did you arrest Pearse at his suit?—No.

1854. Did you see Mr. Edmonds, after you were summoned to attend this Committee?—Yes, I think I did.

1855. Did he not beg of you to assist Silas Pearse as much possible?—No.

1856. Did he not say any thing to that purport?—I called on Mr. Edmonds, after I had received the summons; and I showed it to him, and asked him what he thought it would be necessary for me to take to town; and he said, he should suppose that my evidence was required, to state how frequently Silas Pearse had been arrested.

1857. Is that all the conversation you had?—I believe that was all.

1858. Did he convey to you any advice, or hint, that you should favour Silas Pearse's case?—He did not.

1859. Did you ever arrest him at the suit of Mr. Edmonds?—The execution went in for Mr. Edmonds; he was the solicitor.

1860. Was that execution for above 100*l.*—Yes.

1861. At whose suit?—At the suit of Shaff.

1862. Did you ever arrest him at the suit of Southwood?—That is the same thing.

1863. Now, does it come within your knowledge that there are dishonoured bills of Pearse's lying in the hands of various persons at Plymouth?—I never heard of any, until the day before I left Plymouth to come to town.

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1864. What did you hear then?—I learnt there was one lying at Messrs. Harris's bank.

1865. What is that bank called?—The Naval Bank.

1866. Did you happen to hear what the amount of that was?—I did not.

1867. Who told you about the dishonoured bill at Harris's?—I do not know who it was; it was spoken of in Mrs. Arlis's reading-rooms.

1868. At Mrs. Arlis's shop did Mr. Pearse mention Mr. Edmonds' name to you?—He did not.

1869. You are quite sure he did not; that he did not say he had come at the desire of Mr. Edmonds?—Oh, yes he did; he said he had come from Mr. Edmonds, for the purpose of making inquiries respecting Ryder; for Mr. Edmonds was the solicitor in that action.

1870. Did he tell you Mr. Edmonds sent him to you?—No, I have no recollection of that.

1871. Did you have any conversation about a petition?—No, I had not.

1872. Did you ask him who paid the expenses of the petition?—No, I knew nothing of the petition then.

1873. Did you not ask Mr. Pearse who paid the expenses?—I did not.

1874. Have the goodness to remember clearly whether any thing passed about the petition?—I am satisfied I never heard a word respecting any petition.

1875. Did nothing pass about the Breakwater petition at Mrs. Arlis's shop?—No, all that passed in Mrs. Arlis's shop I have named.

John Collier, Esq., a Member of the House, called in; and Examined.

John Collier, Esq. M. P.

1876. ARE you connected with one of the banks at Plymouth?—I have no connexion, as a partner; I keep an account at the bank.

1877. Has Mr. Pearse been in your debt?—No, I do not think he is in my debt; on the contrary, I believe that, perhaps, I am 30*s.* or 40*s.* in his debt; there is certainly a disputed account between us; the whole amount of the account is somewhere between 30*l.* and 40*l.* There is a disputed account with regard to provisions supplied to a ship, which he has charged me with, and which I think I ought not to be charged with.

1878. Has a bill of Mr. Pearse's ever been returned to you dishonoured?—Never; do you mean an acceptance of his, or a bill drawn by him on another person? a bill that had been drawn by him, was returned to me dishonoured; it was a bill for about 36*l.*, which he immediately took up.

1879. Was it drawn by him on another person?—Yes, drawn by him on another person, and accepted by that person; that person neglected to pay it when due, I came on Pearse, as the drawer of the bill, and he instantly paid the amount.

1880. Was any bill, drawn on Mr. Pearse, ever returned to you?—Not to my knowledge.

1881. Did Mr. Edmonds ever arrest him at your suit?—Never.

1882. Is Mr. Edmonds your solicitor?—Yes; he is occasionally employed by me, and generally.

1883. In point of fact, no solicitor of yours ever arrested Mr. Pearse for any debt due to you?—Never, at my suit.

1884. As far as you have had any transaction with Mr. Pearse yourself, has he conducted himself well and fairly?—Yes, I think so; I have considered Mr. Pearse a respectable tradesman.

1885. Have you had any considerable extent of transactions with him?—Not to any very great extent; I have known Pearse for 20 years and upwards; he was a butcher and cattle-dealer, and he has occasionally supplied my ships with beef and mutton, and things of that sort.

1886. In the transactions between you and Mr. Pearse, have you had to pay him for things you have received?—Yes, generally so.

1887. Is he still a cattle dealer?—I think I have heard, since I was at Plymouth, a day or two since, that he had given up his cattle dealing, and had entirely devoted his attention to the quarries; I cannot speak of my own knowledge.

1888. Is there any thing further, relative to Mr. Pearse, that you wish to state?—No; I know very little of Mr. Pearse, other than having had transactions

tions of this nature. I have known him personally, and I have had transactions with him as a butcher, principally.

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1889. And have you known whether he has borne a fair character?—I always considered him a respectable tradesman.

1890. Do you think that is Mr. Sparrow's hand-writing?—Yes, I think it is the hand-writing of Mr. Sparrow, of Catdown.

Mr. *William Stuart*, called in; and Examined.

Mr. *Wm. Stuart.*

1891. WHAT is your office?—Superintendent of the Breakwater at Plymouth.

1892. Do you consider yourself under the direction of the superintendent of the Dock-yard, and does the correspondence with the Admiralty, relating to the Breakwater, pass through him; or do you correspond directly with the Admiralty?—In some cases I correspond directly with the Admiralty; in other cases I have done it through Commissioner Ross.

1893. When estimates are required for the sum to be laid out on the Breakwater for the current year, do you forward those estimates through the superintendent of the Dock-yard, or directly to the Admiralty?—The contracts have been through Commissioner Ross; the estimates I send directly to the Admiralty.

1894. When were you required by the Admiralty, or by Commissioner Ross, to give any account of the quantity of wrought stone that would be wanted for the use of the Breakwater for the present year?—It was pretty early in the season.

1895. When?—The 3d of February.

1896. What quantity of lime-stone did you report that it would be proper to contract for the service of the year?—Thirty thousand cubic feet.

1897. When were you required to furnish to the Admiralty any statement or estimate of an additional quantity of lime-stone being wanted for the service of the present year?—On the 11th of February.

1898. Have you any correspondence on the subject?—I have; I have not the letters here. On the 12th of February I received a letter from the Admiralty, authorizing me to expend 10,000*l.*

1899. Have you a copy of that letter?—I have not.

1900. On receiving a letter from the Admiralty, that 10,000*l.* was the sum to be expended on the Breakwater for the service of the year, did you make any additional communication to the Admiralty, stating that a larger quantity than 30,000 feet of wrought limestone would be wanted?—I did.

1901. When?—On the 18th of February. It was the day after the tenders were received, that I wrote to that effect.

1902. State what the substance of your letter was?—It was a complete estimate of what the Admiralty wished me to state (as they had done formerly, when they had granted the 5,000*l.*), how the 10,000*l.* was to be expended; and I mentioned, along with other things (stores from the Dock-yard, vessels, and every thing else that we would require), 60,000 feet of limestone, and about 16,000 cubic feet of granite.

1903. Did you communicate the information, that 60,000, instead of 30,000 cubic feet of limestone, and 16,000, instead of 8,000 feet of granite would be wanted, to any person at Plymouth?—I made it quite public; as I thought it was my duty, before the tenders were offered, that the contractors ought to know that the double quantity would be required.

1904. To whom did you make it public?—To any of the contractors who came to give their tenders in.

1905. Who were these parties to whom you communicated it?—It was quite general.

1906. Recollect who the individuals were to whom you told it yourself?—I told it on the 12th of February to Messrs. Brockinshire & Son. I have a list of those parties who came to look at the specifications.

1907. You have a list of those who came to view the samples?—Yes.

1908. Did you see them there yourself?—Yes.

1909. Every one of the parties, whose names are in your list, did you see there?—Yes, the whole of them.

1910. Give the names of all you saw yourself?—The first on my list was on

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the 9th of February; Mr. Trayer and Cole called for Messrs. Johnsons; upon the 10th, Messrs. Simons & Sparrow called.

1911. Did you see them yourself?—I did; Mr. Ross for Mr. Mackintosh.

1912. When?—On the 11th.

1913. Did you see him?—I did. On the 11th Mr. Silas Pearse came, and Mr. Trenery on the 11th; on the 12th, Brockinshire.

1914. You saw all these yourself?—Yes; on the 12th, Messrs. Edward and Robert Scott; on the 13th, the agent of Mr. Gill; and on the 16th, Mr. Eliot.

1915. Did you see all these parties yourself?—I did.

1916. Do you mean to say that you told all these parties that it was 60,000, and not 30,000 feet of limestone that was wanted?—No.

1917. You did not tell them all?—No, because I did not know it myself; it was only after the 12th I could tell them; and it was so public, that I went out that same day, or on the 13th, to the Breakwater, and measured off 40 yards, and told my foreman that we should require that additional quantity.

1918. Do you mean to say you told Mr. Ross?—No, not at that time.

1919. When did you tell Mr. Ross?—I do not know I ever told him; I probably did not see him again.

1920. Did you stick up any notice?—No.

1921. Did you not know that the quantity which was advertised for was 30,000 feet?—Yes.

1922. Then if you had the information on the 11th that 60,000 feet would be wanted, and it was not until the 17th that the tenders were to be put in, and you thought proper to give that information to some of the parties, why did you not stick up a notice for the information of all, so as to make the knowledge general?—It did not occur to me to be right; but I stated at the Dock-yard the propriety of mentioning it to every person that tendered, at the time they brought in the tender for 30,000, and to ask what price they would double the tender for—that was my impression.

1923. To whom did you give this advice?—To Mr. Dent, Commissioner Ross's clerk.

1924. When?—I think it was about the 13th.

1925. What did he say to you?—It was finally agreed that the tenders were to be received on Tuesday, and afterwards to make a fresh tender.

1926. Finally agreed by whom?—By Commissioner Ross, Mr. Dent and myself. Commissioner Ross thought it would be better, as he had no orders from the Admiralty to contract for more than the 30,000 feet, to take the tenders for that, and then advertize afresh.

1927. Was this conversation between you, Captain Ross and Mr. Dent?—Yes.

1928. On the 13th was it?—Yes.

1929. Then some of these parties had the information, and some had not?—They might all have had it, because I made no secret of it.

1930. You say you had not the information until the 12th of February; there were four parties out of the nine that you have mentioned, who called before the 12th?—Yes.

1931. Then there were four at least out of the nine that could not have had the information from you, when they called at Oreston?—They could have had it from others, although not from me.

1932. Is information of this kind of a nature, that men can pick it up in the streets?—They are always inquiring from one another what is going on.

1933. At what time of day did you receive the letter of the 11th?—On the evening of the 12th.

1934. Had you the information before Brockinshire & Son called on the 12th?—I had.

1935. You say that Brockinshire & Son, and Scott, called at your office on the 12th?—Yes, but the 13th was the first time that I gave information to any one about the 30,000 additional quantity being required.

1936. Seven out of the nine parties called from the 9th to the 12th inclusive; and you now say that you did not give them the information about the additional quantity until the 13th; do you persist in saying, that when they called at the office at Oreston, you told these parties that 60,000 feet would be wanted?—No.

1937. Then

1937. Then there was only one out of the nine parties, (and that was the agent of Mr. Gill, who called on the 13th,) to whom you could give the information when calling at Oreston?—And on the 16th Mr. Eliot.

1938. There were then only two out of the nine to whom you could give the information at Oreston, after you had received it from the Admiralty?—I might have met them, and I did meet some of them.

1939. Whom did you meet?—I met Mr. Scott at the reading room, and told him, "I wished to make it as public as I possibly could."

1940. Who told you to make it public?—Nobody; I felt it my duty to do so.

1941. Do you not think it was very unfair to the parties who had not the good fortune of meeting with you, and therefore did not receive the information, to leave them ignorant of that fact which others were put in possession of?—It would not have been so, if we had asked them, when they gave in their tenders, what they would double it for; that was giving them all a fair chance.

1942. Did you ask them, when they put in their tenders, what they would double it for?—I was not present.

1943. Are you aware whether any question of the kind was put to them?—I am not aware.

1944. When did you give Messrs. Scott this information?—I think it was on the 13th, in the morning.

1945. Where?—At the reading-room.

1946. Were you authorized to give the information?—No, I had no order not to do it.

1947. Do you not think it was giving an advantage to those parties who had the information over those who had not?—I do not.

1948. Do you not think a man could afford to contract for 60,000 feet at a less price than he could for 30,000?—Yes, and that was my object in making it publicly known.

1949. Did you make it publicly known?—As publicly as I could.

1950. Did you stick up any notice?—No.

1951. To whom did you mention this, besides Mr. Scott?—I rather think Mr. Sparrow, but I cannot charge my memory as to whom I told it to; the Messrs. Sparrows were told.

1952. Whom did you meet in the street, and inform; there was Mr. Trayer; there was Simons and Sparrow; there was Ross; there was Silas Pearse; there was Trenery; there were Brockenshire & Son, and there were Messrs. Scott, all of whom called before the 13th; which of these parties did you meet in the street and give the information to?—I do not recollect meeting any of them in the street; I told Sparrow, I think, on the quay.

1953. What other parties did you tell?—I do not know that I happened to see any others.

1954. You begun by telling the Committee that as to all the parties who called at your office, you mentioned it to them?—After I knew it myself.

1955. But now it turns out that seven out of the nine called at Oreston before you had the information yourself. Now please to inform the Committee to which of the seven, besides Simons and Sparrow, and Scott, you gave the information, after you received it?—I cannot recollect.

1956. Will you undertake to say that to the agent of Mr. Gill and to Mr. Eliot, when they called at your office, one on the 13th, the other on the 16th, you gave the information, that double the quantity would be wanted?—I think I did.

1957. Will you undertake to say that you did?—I would not go further than to say, I think I did.

1958. Then, out of all the parties the only ones that you distinctly remember that you informed were Scott, and Simons, and Sparrow?—Yes.

1959. Are you in partnership in any way, or have you ever been in any business with Messrs. Scott?—No.

1960. Neither directly nor indirectly?—Neither directly nor indirectly.

1961. Have you ever had any money invested in any business in which they were concerned?—No.

1962. Did Mr. Scott ever write to you to ask you to take a share in the quarry that he bought?—I rather think he did.

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1963. How long ago was that?—I think it must be two years ago.

1964. Was that before or after he purchased the quarries?—It was before he purchased them, probably twelve months; but I do not recollect exactly.

1965. What was your answer?—That I could not do it.

1966. Did you give any reason?—It was merely by word of mouth. I did not write to him that I recollect.

1967. Did Mr. Scott consult you about the quarries, before he purchased them?—He did.

1968. What took place?—I gave him the best opinion that I could. I could do it better than any other person; for in the year 1812 I had measured the quarries for Earl Morley; and again, when he sold them to Kames and Cotton, he wished me to give him my opinion whether it was a fair price.

1969. Did you attend at the quarries to advise Messrs. Scott about their value?—I did.

1970. Have you long been acquainted with Messrs. Scott?—Yes, ever since I went to Plymouth, which was in the year 1811.

1971. Did you attend at the sale?—I did.

1972. Were not the quarries put up to sale, before Messrs. Scott purchased them?—Yes, and at that time it was thought I went there for Government.

1973. For whom did you go there?—It was with Mr. Scott I went.

1974. Did you go there to advise him about the sale?—I did.

1975. Did he buy at that time?—No.

1976. Were they bought in?—They were bought in.

1977. Did you advise him what price he should give, before he completed the purchase?—I did; but he gave more than I advised him to give.

1978. Is that block of limestone on the table a fair sample of the limestone of Plymouth?—It is a very excellent sample; there are not many of the quarries that would turn out the quantity we want of that quality.

1979. Is it of average quality?—I think it is better.

1980. How were the samples of limestone which were exhibited at your office, dressed; were they dressed more roughly or finer than that block?—Rougher than that.

1981. Much rougher?—Yes, considerably rougher.

1982. Suppose you take a block of limestone, of two tons weight, dressed in the way in which it is required to be dressed for the Breakwater, how many feet will go to the ton?—I should state, that in 1812 I had a block of marble one foot square, another six inches square, a third three inches square; and the average of those gave me thirteen feet two inches to the ton.

1983. Were you told that that block of limestone gives thirteen feet and a half to the ton, would that surprise you?—The marble I referred to was polished.

1984. Measure that, and tell the Committee what is its fair measurement?—About a foot square.

1985. Might it be fairly taken as a foot cube?—Yes.

1986. Give the dimensions of the three sides?—A foot each way; I should call it a foot cube.

1987. Amongst the quarriers at Plymouth, what is the universally understood or customary measure, as to the proportion of cubic feet to the ton?—Twelve feet, ever since I went to Plymouth, is what the quarrymen always reckon the ton.

1988. Explain to the Committee what you mean by that?—At one time, previous to this contract, we received 713,830 cubic feet, 4 inches, of dressed limestone. The contractors for that amount paid the quarry-men at the rate of 12 feet to the ton.

1989. Explain what you mean by "at the rate of 12 feet to the ton?"—I do not know that I can explain myself better.

1990. Did the Government ever make a contract by the ton?—No, not for dressed stones. We did with rough stones, we could not do otherwise.

1991. Do you not mean this—a block of stone is taken out of the quarry in the rough state; that then it is dressed by the masons, and they measure it; and then that the master pays the men at so much a ton, calculating one ton for every 12 feet of measurement?—Yes.

1992. The master agrees to pay the masons for their work, not at so much a foot, but at so much a ton?—The quarryman is paid that, not the mason.

1993. The

1993. The master agrees to pay the quarrymen, not so much a foot, but so much a ton?—Yes, reckoning 12 feet to the ton.

1994. Have you any doubt whatever, that when Mr. Pearse gave in his tender at so much per ton, he understood 12 feet to the ton as the calculation? —I cannot say what his view was.

1995. Would you not have calculated it at 12 feet to the ton?—I would not have taken his tender at all, without he explained it.

1996. Did Mr. Pearse call at your office, to ascertain the particulars of the tender to be made?—Yes, and took a copy of them, along with another person.

1997. That specification stated distinctly that the tender was to be made at so much per cubic foot?—Yes, I would never have made a specification otherwise; I could not have done it.

1998. From your experience in that office, should you have conceived a tender, sent in at so much per ton, when it was directed in the specification to be made in cubic feet, admissible?—It was inadmissible.

1999. Did he take away the specification, or make a copy in your office?—He made a copy.

2000. Did he transcribe it with his own hand?—I do not not know that; he had another person with him.

2001. Do you mean to say that a copy was transcribed for him in your office?—In my clerk's office.

2002. Did you see him transcribe it?—I did not, but I was in the room when they were doing it.

2003. Then, as there have been differences in the mode of calculating the proportion of cubic feet to the ton, and as the specification required the tender to be made per cubic foot, would you have considered that an additional objection to taking a tender at per ton?—Not only that, but the state of the atmosphere makes a very material difference; and the mode of measuring makes a great deal of difference. If the stone is not a die square, I cause it to be reduced in measurement one, two or three inches.

2004. When did you know officially that an additional 30,000 cubic feet would be wanted?—The letter was dated the 11th of February, I received it on the 12th. That letter stated that 10,000*l.*, instead of 5,000*l.*, was to be expended upon the Breakwater.

2005. Had it become matter of conversation that this additional sum was to be expended?—Yes.

2006. Did you conceive it was generally known?—It was generally known; I made it as public as I could; I went out on the 13th, on the Breakwater, and instead of measuring out 20 yards, I measured out forty yards, stating to the foreman that we were going to double the work, and that I had authority to spend 10,000*l.*

2007. Did you state that publicly among all the workmen?—No, to the foreman; but it goes from one to the other.

2008. Did you state that on the morning of the 13th?—On the forenoon of the 13th, the words of my memorandum are these; "Went to the Breakwater early; inspected all the works, and measured off 40 yards at the west end; which I propose to finish this year."

2009. Have you ever given advice to any other person, besides Mr. Scott, in matters relating to business of this description?—Yes, frequently.

2010. Mention one or two instances?—To the Earl of Morley, or the Duke of Bedford, or any other person who has asked my opinion, I have given it.

2011. Have you twice valued those same quarries?—I have valued them twice for the Earl of Morley.

2012. Have you ever been to Tavistock, to give advice to the Duke of Bedford?—I have.

2013. What does limestone in the rough sell for, delivered on board ship, for manure?—It is sold at from 10*d.* to 1*s.*

2014. Respecting what quarry did Lord Morley consult you?—That quarry that Messrs Scott has now.

2015. When did you value it for him, for him first?—In 1812.

2016. Did the Duke of Bedford's steward consult you on Pearse's quarry? —No; he has mentioned about it to me.

2017. Which is the larger quarry, Scott's or Pearse's?—Scott's; Pearse's is but a small quarry.

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2018. You have had conversation with the Duke of Bedford's steward about Pearse's quarry, and so on; do you, of your own knowledge, know any thing of Pearse's circumstances; or whether he was supposed to be an insolvent person or not?—Not of my own knowledge.

2019. What is the general reputation of the place?—I do not choose to speak of people's characters.

2020. Do you know Mr. Pearse's quarries?—I have not examined them lately.

2021. How many cubic feet do you think he can raise a month in them?—He might raise about 100 to 150 cubic feet a week.

2022. How many cubic feet a week would have been required, under the terms of the contract for 30,000 feet?—Taking eight months in the year for the delivery, it would be about 850 cubic feet a week.

2023. Then, Mr. Pearse, according to your calculations, was able only to raise about 150 cubic feet per week in his own quarry, 850 being required for the service of the Breakwater; do you think Mr. Pearse was in a condition to fulfil the terms of the contract?—Not without purchasing.

2024. Then from his own quarry you think he was not able to comply with the terms of the contract?—No.

2025. Do you conceive, from your knowledge of Mr. Pearse, that he was in a situation, and that his credit was such, that he could have supplied easily 700 cubic feet a week, if necessary?—I should wish not to answer that question.

2026. What opportunity have you had of knowing his circumstances?—I know nothing of my own knowledge, only what I hear.

2027. Do you believe he was in a situation to have supplied those 700 additional cubic feet per week?—His men are frequently going without their wages, I believe, I have been so told.

2028. From whom have you heard that?—It has been stated generally in the place.

2029. By whom?—By my own work people and others.

2030. When did you hear this?—I have heard it frequently; but I would beg not to be pressed to give an opinion upon a person's character.

2031. You must give the answer?—Then candidly, if the Admiralty had written to me to ask my opinion of Mr. Pearse, and whether I thought he was able to fulfil the contract, I most conscientiously must have said, he could not have done it.

2032. Were you ever referred to on that point?—I was not.

2033. Do you know Johnson's quarries?—Yes.

2034. Are they extensive?—No.

2035. Which is the largest, Pearse's or Johnson's limestone quarry?—Much about the same, I should suppose.

2036. Then Johnson's could not supply 800 feet a week?—No.

2037. What number of men do you suppose Pearse employs a week?—I do not know; I very seldom interfere with other people's business.

2038. Do you know whether Pearse supplied Mr. Mackintosh, about two years ago, with a considerable quantity of stone for the Victualling Office?—I know that Mr. Mackintosh had some from there; but his chief place of resort was the quarries belonging to Scott.

2039. Would not the amount of the contract for limestone be about 1,000*l.* taking it at 30,000 feet?—Yes.

2040. Do not you think Mr. Pearse could have executed a contract to that amount?—I do not know that he could not.

2041. It is a small amount, is it not?—Yes.

2042. Is it not the habit to look particularly to the sureties of the contractor?—I would rather look to the contractor himself.

2043. Is it not a common practice for men in business to put in their clerks as the actual contractors, they becoming sureties for their clerks?—I do not know that.

2044. Did you ever hear of such a thing?—Very seldom, I think.

2045. You have, then, heard of such a thing?—I do not know that ever I did.

2046. You mentioned a clerk of the name of Ross; has Mr. Mackintosh any contract for supplying the Breakwater now?—None.

2047. Has he any work at Plymouth?—None.

2048. Had he two clerks there; both Roberts and Ross?—Yes.

2049. Are they both with him still?—Yes, but not at Plymouth; I have measured

Mr. *Wm. Stuart.*

1 September 1835.

measured work at the New Victualling Office, together with both of those clerks.

2050. He has no works or quarries at Plymouth now, has he?—Not that I know of.

2051. But would you not, in giving your advice for engaging with a contractor, look much more to his power of fulfilling the contract, than to the validity of his surety, in case the principal did not fulfil it?—Certainly, particularly in reference to the Breakwater; I have been very much thrown back with my work, on account of the way in which the contractors have failed in fulfilling their contracts.

2052. Is it not necessary, therefore, in work of this description, that every condition should be punctually and accurately fulfilled?—No doubt of it.

2053. The forfeiture, therefore, of the security would have been no compensation to the Government for the loss of time in fulfilling the contract?—None whatever, for we probably might have lost all the 10,000*l.* in a gale of wind.

2054. Where are Mr. Scott's granite quarries?—He has none.

2055. Has he not the granite contract now?—He has.

2056. Where does the granite come from, that he is supplying?—From Penryn and Saint Blazy.

2057. Any where near Lostwithiel?—It is Penryn, we generally call it.

2058. Does not some come from Parr?—Yes, that is Saint Blazy.

2059. Where does Mr. Johnson's granite come from?—From Dartmoor.

2060. Is that Haytor granite?—No.

2061. Is the quality of the granite which Mr. Scott is serving, as good as that which was offered by Mr. Johnson?—Some of it is fully as good, and it is equal to our sample.

2062. You have just answered, that 1,000*l.* was no very large sum; do you think that a person, who was arrested on the 1st of February for 30*l.*, is a man to whom you could, on the 17th of February of the same month, have intrusted so important a charge as the contract for the Breakwater?—No, I could not.

Mr. *Silas Pearse*, called in; and Examined.

Mr. *Silas Pearse.*

2063. IS there an unsettled account between you and Mr. Wilson, the Duke of Bedford's agent, on the subject of the Royalty, that you are to pay him on all the limestone you raise?—Yes; there never has been a settlement.

2064. Are you not to pay him one-seventeenth of the value?—One-seventeenth of the profit.

[*The clause in the lease, relative to the payment of the* 17*th to the Duke of Bedford, was read to the Witness.*]

2065. Are you not to pay the Duke a seventeenth part of what the limestone sells for?—Yes; but there are the wharfs and the excavations which I have made; the quarry had never turned to any account, till last year.

2066. Do you claim a set off, on account of what you have laid out on the wharfs and jetty?—Yes, decidedly so.

2067. Is there any covenant in your lease to that effect?—I always understood that was to be the case.

2068. Have you read the covenant?—Not this year.

2069. Then you do not know the terms on which you held the property under the Duke?—I always understood I was to allow the seventeenth part, and there was to be a remuneration made for my improvements.

2070. Has the Duke's agent, Mr. Wilson, applied to you for a return of what you had sold the limestone for?—Not every year.

2071. Do you mean to say he has not applied?—Yes, he did, about three weeks ago.

2072. Do you mean to say, that from 1830, when your lease began, until about three weeks ago, he never applied to you, to render him an account of what the limestone had sold for?—I mean to say that Mr. Wilson did; and my reply was, "There was my book, ready for Mr. Wilson, or any other person he chose to send, for inspection."

2073. Has not Mr. Wilson, time after time, desired you to send in your accounts?—I have before stated that Mr. Wilson has applied to me.

2074. Have you sent in the accounts?—I do not know I have any accounts to send in; there were my books for inspection.

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2075. If Mr. Wilson has stated that he has desired you to send in accounts, and you have not sent in those accounts, has Mr. Wilson stated that which is not correct?—No; there are my books for inspection, for Mr. Wilson or any person he may please to send to look to the books, showing what I have raised, shipped and been paid for.

2076. Are your accounts kept in such a way, that you will not send them in, and that the Duke's agent must come to you to inspect them?—They are there, ready for him to inspect.

2077. Why have you not sent in the accounts to the Duke's agent?—I have no objection to do so; the agreement was, that my books were, at any and all times, to be open for inspection; and there they are at all times.

2078. Has the Duke of Bedford's agent repeatedly desired you to send in the accounts?—Mr. Wilson asked me that question once; I do not know that he ever did any more.

2079. How long ago?—Within the last three weeks; I proposed to meet him at Plymouth, and went to Plymouth with my accounts, and Mr. Wilson left Plymouth about half an hour before I came.

2080. Is that three weeks ago?—I should think not more than that; I went to see Mr. Wilson at the Commercial-inn, and he had left about half an hour before I came.

[*The covenant in the lease, relative to keeping and returning accounts, was read to the Witness.*]

2081. Have you made those accounts?—My accounts were ready for inspection by the Duke's agent.

2082. Have you, during the last four years, regularly made those accounts?—When I say regularly, I have never been asked for them, until within the last twelve months.

2083. You are not required to make any admission that will amount to an acknowledgement that you have broken the covenants of your lease; have you, or have you not, regularly kept and returned those accounts during the last four years; you may now answer that question or not, as you think proper?—I have regularly kept them, but I have not returned them; I have not been asked to return them, until within the last seven or eight months, or it might have been twelve months.

2084. In consequence of that application, did you make the required returns?—I have not delivered any account to any one; my accounts are ready for inspection for the Duke's agent, or any person he may choose to appoint, from the time I commenced up to the time I left Plymouth.

2085. Do you happen to know the name of William Watts Harris Hendy?—I know a person called Hendy of Elburton.

2086. You may answer this question or not, as you please; did you ever sign Hendy's name to a bill?—No.

2087. Were you ever charged with it?—Never.

2088. Did you ever hear such an accusation made until this day?—Never.

2089. Do you know a person of the name of David Derry?—Yes.

2090. Do you know any thing of a bill for 88*l.* which Mr. David Derry took, with the name of Mr. Hendy of Elburton signed to it?—No.

2091. You know nothing about it?—I do not recollect such a thing.

2092. No application was ever made to you on the subject of that bill, and on its lying at the Naval Bank?—Never.

2093. You never were charged with writing the name of Mr. Hendy, of Elburton?—Never.

2094. As to this petition, did you ever state to any body that you knew nothing of it, until some letters and papers were put into your hand by the parties who had prepared the petition; and that you should not have done so of your own accord?—Never; it is quite my own act and deed.

2095. Do you know a person of the name of Best at Plymouth?—No, I do not know him.

2096. Did you ever state to him, that you knew nothing of this petition, until the letters and papers were put into your hand by the parties who prepared them; and you would not have done so of your own accord?—No, I beg leave to say I did not know any thing about whose was the lowest tender for the Breakwater, until I had some

some information from friends of mine; but as to the petition, it is my own act and deed, in every sense of the word.

2097. You stated you rented a small farm of the Duke of Bedford?—I did.

2098. You stated likewise that you had been very regular in the payment of your rent of that farm?—I do not owe the Duke of Bedford a farthing of rent; I do not think I said I was regular or irregular; I said I did not owe him a farthing.

2099. Did you owe him any thing a month ago?—I did.

2100. For how many years had you been in arrear?—I should say two years.

2101. But that arrear was paid off about a fortnight ago?—I beg to say the Duke of Bedford owed me some little money for years; and that was a set off in some measure against my rent.

2102. But till within a fortnight ago, you were two years in arrear?—Yes, I think it was so, a fortnight or three weeks ago.

2103. You were asked the other day about a conversation you had with Mr. Sweet in Mrs. Arlis's shop; Mr. Sweet states this to be the substance of what passed: that you asked Sweet what he had done with a person who owed you money, of the name of Ryder; that when he had answered your question about Ryder, you observed to him, "that if any question was asked concerning yourself, that he, Sweet, should say, that he knew nothing about you;" and upon Sweet observing that he did not quite understand what you meant, you then produced from your pocket the summons that you had from the Chairman of this Committee. Sweet understood by what had passed, that you intended to desire him not to say any thing to this Committee about any money transactions of yours, that Sweet, as sheriff's officer, might be cognizant of?—I never intended such a thing.

2104. State yourself whether that is a correct account of what passed?—No; I beg leave to say, that I never mentioned any thing respecting what Mr. Sweet might be called on to say or hear, or to be questioned on; I merely asked him respecting this man, whom I named the other day, Ryder; and I believe that was the substance of our conversation.

2105. Did you pull out of your pocket the summons that you had from the Chairman of this Committee?—I did.

2106. And show it to him?—I did.

2107. Did you accompany that with any observations, either immediately before you drew it out of your pocket, or afterwards, or at the time?—I believe at the time.

2108. What did you say?—I know we were talking about the business that had been going on, as it is well known at Plymouth; and I said, "I had a summons to go to London," that I showed to him, and really I do not know that there was any other conversation passed; I do not recollect any thing particular.

2109. Did you state what Sweet says you did?—[*The statement of Sweet as to what passed was read to the Witness.*]—I had no idea of Sweet being called here, or any where else, on my account.

2110. Is that true what Sweet states, or not?—It is not true.

2111. Do you contradict it?—Yes.

2112. State what you did say, then?—I came to Mrs. Arlis's shop, and Sweet was there, and I asked him respecting Ryder; then we had some conversation respecting this business that was going on between Scott and me, and I said, "I had a summons to go to London," took the paper from my pocket, and showed him the letter; to the best of my knowledge, nothing passed of consequence, more than that.

2113. State what passed?—If I had stated what he says I did, I ought to have recollected it.

2114. In that conversation, were you asked, or did any thing pass about who were to pay the expenses of that petition?—No not a sentence; there was no such thing as the petition mentioned.

2115. You are certain you never told him, "If any questions are asked about me, say you know nothing about me?"—To the best of my knowledge, on oath, I would say so.

2116. Then that which Mr. Sweet states on that subject is false, or he misunderstood you?—There must be a misunderstanding; on oath I may say, to the best of my knowledge, I have not so said.

2117. Have you received any letter from Mr. Treeby, which you have sent to the Chairman of the Committee?—Yes; I have.

 2118. What

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1 September 1835.

2118. What is Mr. Treeby, who addresses this letter to you?—He is cashier of Soltan & Company, of Plymouth.

2119. Are they respectable merchants at Plymouth?—Yes, as respectable as any in the West of England.

[*The letter was handed in and was read, as follows:*]

My dear Sir, Plymouth, 29th August 1835.

Mr. Soltan being at Efford, I am not likely to see him until Monday, unless I go out on purpose; and, at any rate, I cannot accomplish this to night, it being now 10 o'clock. In the mean while I feel a pleasure in saying, that throughout the various transactions this house has had with you, for a period I believe of 20 years, and upwards, the management of which has invariably been confided to me, and embracing transactions to the extent of thousands of pounds for meat, fodder, vegetables, limestone, &c. I have found you upright, fair, and honourable; you may have been equalled by some tradesmen, but never surpassed; and I do not hesitate to assert, that had you taken the late contract for supplying the Breakwater with limestone, you would have faithfully and duly executed the same; because I conceive your means ample, and that for ability, local knowledge, and exertion you cannot be surpassed by any one here. I am, my dear Sir,

Your very obedient servant,

Mr. Silas Pearse, London. *Samuel Treeby.*

The Witness.]—I beg to say, I wrote Mr. Treeby a letter on business, not respecting what was passing here; and that letter might be forthcoming; but I never asked for a character respecting my responsibility, or any thing of the sort.

2120. Did you write to Mr. Galsworthy?—I saw him.

2121. What is he?—He is a private gentleman in this town.

2122. Where does he live?—I do not know the name of the place.

2123. Is he a countryman of yours?—Yes; born in the same place.

[*A certificate from Mr. Silas Galsworthy, dated 29th August 1835, 92, Upper Stamford-street, was handed in, stating Mr. Pearse to be an honourable and respectable man.*]

2124. Who is Mr. John Galsworthy?—A brother; they are not in business together.

2125. What were your transactions with Mr. Galsworthy?—Mr. Galsworthy and I were born within 100 yards of each other.

2126. Have you been in the habit of living near each other?—Yes; Mr. Galsworthy has known me from that time to this.

2127. Has he lived the last thirty years in London?—No; only the last four months in London.

2128. Before then where did he live?—At Devonport.

2129. He is an old inhabitant of Devonport, and recently left it?—Yes.

[*The certificate from Mr. John Galsworthy was handed in, and was as follows:*]—

This is to certify, I have known Mr. Silas Pearse, of the parish of Plymstock, in the county of Devon, nearly forty years, and have always known him to be a most honourable and respectable man in all his transactions. I am myself a native of Plymstock, and have been a resident of Devonport until within the last four months.

87, Upper Stamford-street, 31st August 1835. *John Galsworthy.*

2130. Who is Mr. Bond, who writes you this letter from Limehouse?—He is a mast-maker and boat-builder.

[*A letter from Mr. Thomas Dimley Bond, dated Limehouse, 28th August 1835, addressed to Mr. Silas Pearse, stating Mr. Pearse to be punctual and persevering in business, was read.*]

2131. Who are Tebbutt, Stourmont and Spence?—Ship-builders at Limehouse.

[*A letter from Tebbutt, Stourmont and Spence, dated Limekiln Dock, Limehouse, August 29th, 1835, addressed to Mr. Silas Pearse, stating that Mr. Pearse had conducted his transactions with them in a business-like manner, and that the payments had been made entirely to their satisfaction, was read.*]

John

John Martin Sweet, again called; and Examined.

2132. HAVE you an account of the number of times Mr. Pearse has been in your hands as a sheriff's officer?—Yes; six times he has been arrested by me.

2133. Since when?—Since October 1833.

2134. Now give the number in each year?—In 1833 he was arrested once.

2135. For what amount?—I think it was 300*l.* and upwards.

2136. In 1834?—In 1834 I arrested him at the suit of Shaff, and he then gave a cognovit.

2137. Was it on that cognovit the execution took place?—Yes. I stated he had settled just now the whole of the debts and costs, with the exception of one, in which he gave a cognovit. There was one other, where he was arrested at the suit of Mr. Jago Squire, when he deposited with me, with the consent of Mr. Squire, his wife's saving bank book.

2138. By that you mean the security of money that was in the saving bank, in the name of his wife?—Yes.

2139. Did he redeem that?—I gave him his discharge on the receipt of that. I then gave notice to the bank to draw the monies out, with a written order I received from Mrs. Pearse.

2140. Did you draw the money out?—I drew the money, after the time had expired.

2141. And you took that in payment?—Yes, and gave Mr. Pearse back the overplus. There were 70*l.* or 80*l.* in the bank.

2142. In February 1835, when was he arrested?—February 1st.

2143. What was he arrested for?—Thirty pounds.

LIST OF APPENDIX.

Appendix.

No. 1.—DOCUMENTS relative to the Supply of Materials for the Breakwater at Plymouth - p. 113

No. 2.—DOCUMENTS produced by Mr. *Edward Scott* to prove that 12 feet of Limestone go to the Ton - - - - - - - - - - - - - p. 123

APPENDIX.

Appendix, No. 1.

DOCUMENTS relative to the Supply of MATERIALS for the BREAKWATER at *Plymouth.*

1835.
28 January : (No. 1.)

THE Admiralty to Captain Ross.—(Abstract.)—£. 5,000 is the sum to be expended on the Breakwater during the present year. Tenders are to be made for so much granite and limestone as Mr. Stuart may consider will employ his establishment of workmen for the presen year.

4 February : (No. 2.)

ADVERTISEMENT for TENDERS for the Supply of STONE for the BREAKWATER at *Plymouth*, which was inserted from the 4th to the 7th of February in the "Devonport Telegraph," "Plymouth and Devonport Journal," "Plymouth and Devonport Herald," and "the West Devon Standard."

TENDERS.—Persons willing to supply and deliver, either at the Breakwater in Plymouth Sound, or at a wharf in Catwater, Plymouth, about 8,000 cubic feet of wrought granite, and at the same wharf in Catwater, about 30,000 feet of wrought limestone, are desired to signify, on Tuesday, the 17th of the present month, in writing, under sealed cover, at my office in Plymouth Dock-yard, the terms on which they will engage to supply and deliver the same, at the respective places above mentioned.

The samples, dimensions and other particulars of the wrought stone, may be seen at the office of Mr Stuart, at the Oreston Quarries, near Plymouth.

No Tenders will be received after 12 o'clock of the above day, and the parties or an agent should be in attendance therewith.

Plymouth Dock-yard,
4 February 1835. } *Charles B. H. Ross.*

4 February : (No. 3.)

SPECIFICATION of the GRANITE and LIMESTONE required for the BREAKWATER; exhibited at the Office of Mr. *Stuart*, at Oreston, from the 4th of February to the 17th.

THE probable amount of stone required will be about 6,300 cubic feet of granite dove-tailed, and 1,875 cubic feet of granite mould-stones; and about 30,000 cubic feet of limestone; *viz.*

1,500 cubic feet of the granite dove-tailed stones, to be delivered monthly from the date of the contract.

And the granite mould-stones to be delivered between the months of May and August in the present year.

3,300 cubic feet of limestone will be required monthly, and the quantity to be completed by the end of September.

The whole of the granite and limestone is to be furnished in every respect (and in no case worse, as to form, dimensions, quality and workmanship) agreeably to a specimen of each description of stone now lying at His Majesty's Quarries, Oreston, and to the annexed Schedule.

The contractor for the granite will give in a price per cubic foot for delivering it at the Breakwater, where the contractor's men will be required to chain and sling them, and to assist in taking the same from the vessel; and in case of any accident or damage happening to the vessels, either from a stone falling from the slings or chains, or any other cause, the contractor to be responsible for the same, whether done by his or the men employed by Government; and in no case will any allowance be made to the contractor, in the event of vessels being detained and not unloaded, whether the detention be caused by storms or any other circumstance.

The Government to find men and machinery on the Breakwater, only for assisting in unloading the vessels; and the contractor will also give in a price, per cubic foot, for delivering it at a convenient wharf in Catwater, for vessels to take the stone on board with their own gear, from the edge of the wharf.

1835.
4 Feb.—*continued.*

The limestone to be furnished at a convenient wharf in Catwater, where the vessels can take the stone on board with their own gear from the edge of the wharf.

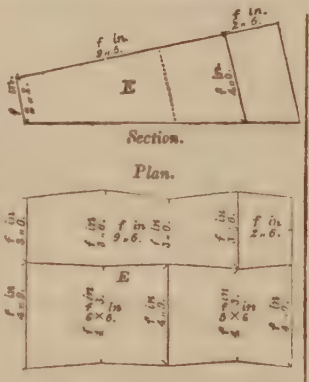
All the granite and limestone are to be measured, either on their delivery on the Breakwater, or when shipped or re-shipped, at the expense of the Crown, from the wharf or wharfs in Catwater, as the case may be; but any stones, either granite or limestone, found deficient in quality, dimensions or workmanship, are to be deducted from the measurement, and the contractor must remove the same; and if not removed or taken away within eight days, the same is to be used in the rough work, and no allowance made to the contractor in any shape whatever.

All the different descriptions of granite and limestone are to be measured and paid for only according to their net cubical contents, when worked to the several required forms, without any allowance whatever for waste, dove-tailed work, or any thing else; and in no case (except when conveyed by the Government) is the stone to be considered as received, until safely landed on the Breakwater.

W. Stuart, Superintendent.

SCHEDULE of the GRANITE and LIMESTONE.

	£.	s.	d.
Granite dove-tailed Bonding-stones, the upper surfaces of which are to be prepared with an inclination of five feet horizontal to one foot perpendicular, and in form and dimensions according to the annexed Drawings and Specimen marked (E.), delivered on the Breakwater, including every expense - at per cubic foot			
Ditto - - - ditto - - - but delivered at a convenient wharf in Catwater, so that vessels may take them on board with their own gear - - - - - - at per cubic foot			
Granite Mould-stones, for the upper termination of the south slope and top of the Breakwater, and in form and dimensions according to the annexed Drawings and Specimen marked (F.), delivered on the Breakwater, including every expense, at per cubic foot			
Ditto - - - ditto - - - but delivered at a convenient wharf in Catwater, as above stated - at per cubic foot			
Limestone for casing the south slope, top and north slope of part of the west arm, similar in thickness to those already set in the finished work, not to be less than 3 feet long, and from 4 to 5 feet in depth of bed; and to be dressed according to Specimen marked (G.); delivered at a convenient wharf in Catwater, so that vessels may take them on board with their own gear - - - - - - - at per cubic foot			



(No. 4.)

4 February:

FORM of TENDER exhibited at Mr. *Stuart*'s Office.

Sir, February 1835.

I HEREBY engage to supply and deliver, at the different periods mentioned in the Specification, or at such other times as demanded by the superintendent, either upon the Breakwater in Plymouth Sound, or at a convenient wharf in Catwater, Plymouth, about 8,000 cubic feet of wrought granite, and at the said wharf or wharfs in Catwater, 30,000 cubic feet of wrought limestone, in all respects according to the samples, dimensions, specification and conditions exhibited at the Oreston Office and Quarry, at the following prices; *viz.*

1st. Granite dove-tailed Bonding-stones, delivered at the Breakwater - - - - at per cubic foot

2d. Granite, dove-tailed as above, delivered in Catwater at per cubic foot

3d. Granite

1835.
4 Feb.—*continued.*

3d. Granite Mould-stones, delivered at the Breakwater, at per cubic foot

4th. Granite Mould-stones, delivered in Catwater, at per cubic foot

5th. Limestone for casing the south slope - at per cubic foot

And I beg leave to offer, if required, Mr. ——— of ——— as security for the due performance of the agreement.

I am, Sir,

Captain Superintendent H. B. Ross, C. B.
&c. &c. &c.
Plymouth Dock-yard.

(No. 5.)

4 February:

Captain Ross to the Admiralty.—(Abstract.)—Transmits the advertisement for tenders for that supply of stone, which Mr. Stuart considers sufficient to keep his workmen employed; also, an Estimate of the charges for the Breakwater during the current year; *viz.*

Salaries - - - - - -	£.	3,290	– –
Stores - - - - - -		831	4 3
Powder and Coals - - - -		380	– –
Granite, 8,000 feet, at 2*s.* - - -		800	– –
Limestone, 30,000 feet, at 10*d.* - -		1,250	– –
Total - - -	£.	6,551	4 3

(No. 6.)

11 February:

The Admiralty to Captain Ross.—(Abstract.)—£. 10,000 is the sum to be voted by Parliament for carrying on the works of the Breakwater during the present year; which sum is to cover all expenses of salaries, workmen, machinery and materials; and Captain Ross is to cause a contract for the latter; (*viz.* the materials) to be made forthwith.

(No. 7.)

11 February:

The Admiralty to Mr. Stuart.—(Abstract.)—A Letter to the same effect as the preceding.

(No. 8.)

17 February:

TENDER made pursuant to Advertisement, by Mr. *Pearse.*

Sir, Lang's Quarries, Oreston, 17 February 1835.

I HEREBY engage to supply and deliver, at the different periods mentioned in the Specification, or at such other times as demanded by the superintendent, at a convenient wharf in Catwater, Plymouth, or wharfs in Catwater, 30,000 cubic feet of wrought limestones, in all respects according to the samples, dimensions, specifications and conditions exhibited at the Oreston Office and Quarry, at the following prices; *viz.* 30,000 cubic feet of wrought limestone, as above, at 8*s.* 4*d.* per ton; and I beg leave to offer, if required, John Milton, Esq. of Liskeard, Cornwall.

I am, Sir, your most obedient humble Servant,

To Captain Superintendent Ross, C. B.
Plymouth Dock-yard.

(signed) *Silas Pearse.*

(No. 9.)

17 February:

Captain Ross to the Admiralty.—(Abstract.)—Refers to the Admiralty Letters of the 28th January and 11th February; transmits the several tenders * he has received; requests that the accepted tender may be returned to him, and that he may be supplied with a blank form of contract and bond, if the contract is to be drawn on stamps.

(No. 10.)

18 February:

Mr. Stuart to the Admiralty.—(Abstract.)—States, in reply to the Admiralty Letter of the 11th, that he proposes to case with wrought granite and limestone 40 running yards of the western arm, and as many yards as his means will allow of the main arm, east of landing-place, &c.

For

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* Ten tenders were transmitted, as appears from Mr. Hancock's letter, 11th August.

1835.
18 Feb.—*continued.*

For this purpose he will have to contract for about 16,000 feet of wrought granite, and about 60,000 feet of wrought limestone, exclusive of the wrought and rough limestone and quarry rubbish that he can procure from the Oreston quarry. Another Government stone-vessel, and 20 more men will be required.

He delayed his letter with a view of remarking on the tenders that were delivered at Captain Ross's yesterday. But, as they were not opened in his presence, he knows nothing of the prices that ought to govern his estimate.

	£.	s.	d.
Salaries and wages of present establishment - - -	3,290	–	–
Stores from the Dock-yard - - - - - -	831	–	–
Powder, machinery, &c. - - - - - -	308	10	–
Granite, dove-tailed, - 12,600 cubic feet, at 2*s.* - -	1,260	–	–
Granite, Mould-stones 3,750 „ 1*s.* 10*d.* -	343	15	–
Limestone, - - 60,000 „ 10*d.* -	2,500	–	–
Additional wages to men in summer - - - -	224	–	–
Horse-hire - - - - - - - -	33	15	–
Twenty additional men - - - - - -	858	–	–
Additional vessel, men and stores - - - -	350	–	–
	£. 9,999	–	–

19 February:

(No. 11.)

ADMIRALTY MINUTE concerning the Tenders transmitted by Captain *Ross* on the 17th.

Let Mr. Taylor make an Abstract, to show which is the most advantageous offer.

20 February:

(No. 12.)

REPORT made by Mr. *Taylor*, Civil Achitect to the Admiralty, on the Tenders referred to him.

Messrs. Johnson's is by far the most reasonable offer for granite; but he has only filled in the items, "as delivered at a convenient wharf in Catwater," and has struck out of his offer, "or upon the Breakwater."

Silas Pearse's offer for limestone is the lowest; viz. 8*s.* 4*d.* per ton.

(Abstract preparing.) *G. L. T.*

Added at the bottom, in Mr. Dawson's hand-writing; "Read, and see Minute of this day. Mr. Scott's offer for limestone, in his letter, Feb. 18th, is the lowest. He offers it at 8*d.* Send to Somerset-house."

20 February:

(No. 13.)

EXTRACT from Mr. *Taylor*'s Abstract of the Tenders.

	Johnson. s. d.	Pearse. s. d.	Scott. s. d.
No. 1. Granite delivered at Breakwater -	- - -	- - -	1 11½
No. 2. Ditto - - Catwater -	1 6 ✓	- - -	2 1
No. 3. Granite Mould-stones delivered at - - Breakwater -	- - -	- - -	1 8½
No. 4. Ditto - - Catwater -	1 6 ✓	- - -	1 10½
No. 5. Limestone - - - - - -	- - -	8 4 ton (about 7*d.*) ✓	– 8¾ *

The prices marked ✓ are the lowest. *G. L. T.* Feb. 20th, 1835.

* *Added here in Mr. Dawson's hand-writing,* "8*d.* ✓ See Amended Contract, 18th Feb."

20 February:

(No. 14.)

LETTER from Messrs. *Scott* to the Right Hon. *G. R. Dawson*, Secretary of the Admiralty, bearing date, Plymouth, 18 February, but delivered by Mr. *Edward Scott* at the Admiralty, 20 February 1835.

Sir,

Having understood that My Lords Commissioners of the Admiralty had determined to double the quantity of both granite and limestone for the use of the Breakwater, and knowing that no other quarry but ours can produce the required supply, or of such fine large blocks so suitable for the work, we are induced to amend our tender of yesterday, and therefore beg to say that we are willing not only to furnish 16,000 cubic feet of granite, and 60,000 cubic feet of limestone, in all respects according to the samples, dimensions, specifications and conditions exhibited,

1835.

20 Feb.—*continued.*

exhibited, but also to furnish any quantity that may hereafter be required for the completion of the Breakwater, at the following prices; viz.

1. Granite dove-tailed building stones, to be delivered at the Breakwater, at 1 *s.* 10 *d.* per cubic foot.
2. Granite dove-tailed building stones, delivered at a convenient wharf in Catwater, at 1 *s.* 11½ *d.* per cubic foot.
3. Granite mould-stones, delivered at the Breakwater, at 1 *s.* 7 *d.* per cubic foot.
4. Granite mould-stones, delivered at a convenient wharf in Catwater, at 1 *s.* 9 *d.* per cubic foot.
5. Limestone, delivered at a convenient wharf in Catwater, at 8 *d.* per cubic foot.

And we beg leave further to offer, if required, Messrs. Harris, Rosdew & Co., bankers, of Plymouth, as security for the due performance of the agreement.

We remain, Sir, &c.

(signed) *Edward & Robert Scott.*

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20 February: (No. 15.)

ADMIRALTY MINUTE.

WRITE to the Captain Superintendent at Plymouth, informing him, that the various tenders for the supply of granite and limestone for the Breakwater have been received at this office, some proposing to deposit the materials at Catwater, some on the Breakwater; and desire him to communicate with Mr. Stuart as to which, in their opinion, is the preferable plan of delivery; and to report to My Lords.

20 Feb. 1835. *Geo. R. D.*"

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20 February: (No. 16.)

The Admiralty to Captain Ross.—(Abstract.)—To the effect of the foregoing Minute.

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20 February: (No. 17.)

The Admiralty to Mr. Stuart.—(Abstract.)—To the same effect with the preceding.

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23 February: (No. 18.)

Captain Ross to the Admiralty.—(Abstract.)—Mr. Stuart is of opinion, that if the prices tendered are equal, preference should be given to delivering the stone at the Breakwater; to remove stone from Catwater to the Breakwater with cost for granite, 1½ *d.*; for limestone, 1½ *d.* per foot.

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25 February: (No. 19.)

ADMIRALTY MINUTE.

INFORM the Captain Superintendent, that My Lords have examined the contract, and that they have decided upon giving the contract for granite to Messrs. Johnson, and for limestone to Mr. Scott, to be delivered at Catwater.

Desire him to enter into the necessary arrangements, and to take security.

(signed) *Geo. R. D.*

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25 February: (No. 20.)

The Admiralty to Captain Ross.—(Abstract.)—That having examined the contracts for granite and limestone tendered for the use of the Breakwater, their Lordships have decided upon giving the contract for granite to Messrs. Johnson, and for limestone to Mr. Scott, to be delivered at Catwater; and Captain Ross, in conjunction with Mr. Stuart, is to enter into the necessary arrangements, and to take proper security.

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25 February: (No. 21.)

The Admiralty to Mr. Stuart.—(Abstract.)—To the same effect as the preceding.

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27 February: No. 22.

The Admiralty to the Accountant-general of the Storekeeper-general's office. (Abstract.)—Notice given of the two preceding Letters. *Vide Question* 1232 *of the Evidence.*

1835. (No. 23.)

27 February:

Captain Ross to the Admiralty.—(Abstract.)—He requests that the tenders of Messrs. Johnson and Mr. Scott may be returned to him, and that he may be furnished with two blank stamped forms of contract and bond.

(No. 24.)

2 March:

Mr. Innes, of the Admiralty, to Mr. James, of the Contract Office, Somerset House.—(Abstract.)—Requests Mr. James to forward the accompanying tenders of Johnson and Scott, by that evening's post, to Captain Ross, together with two blank stamped forms of contract and bond for execution. *See Question* 1184 *of the Evidence.*

(No. 25.)

4 March:

Captain Ross to Messrs. Scott.—(Abstract.)—Informing them that their tender for limestone had been accepted.

(No. 26.)

7 March:

Captain Ross to Messrs. Scott.—(Abstract.)—Requests them to attend, with their surety, at his office, on Tuesday, 10th March, to execute the contract and bond.

(No. 27.)

10 March:

LETTER from Captain Superintendent *Ross* to the Right Hon. *G. R. Dawson.*

Sir, Plymouth Yard, 10th March 1835.

Messrs. Edward and Robert Scott having this day executed the contract for the supply of 30,000 feet of limestone, for the service of the Breakwater, according to the directions of My Lords Commissioners of the Admiralty, by your letter of the 25th ultimo, I beg leave to transmit herewith the said contract and bond, and acquaint you that the amount of one-half the stamps (2 *l.* 7 *s.* 6 *d.*) has been paid by the contractors into the hands of the treasurer's clerk, whose receipt is also enclosed.

I have, &c.

(signed) *Charles B. H. Ross.*

(No. 28.)

10 March:

LETTER from Messrs. *Scott* to the Right Hon. *G. R. Dawson.*

Sir, Plymouth, 10th March 1835.

We beg to acquaint you, that Captain Superintendent Ross having prepared the bond and contract for our supply of only 30,000 cubic feet of limestone, from a belief that if the Lords Commissioners of the Admiralty meant to accept our amended tender for 60,000 cubic feet, they would have distinctly said so, we thought it better, as our bondsman had gone to his office for the purpose, to sign these documents, under the full persuasion that their Lordships would either alter the quantity from 30,000 to 60,000 cubic feet, or direct him to make out another contract for the remaining 30,000 cubic feet, which is required for the Breakwater during the present year.

We have therefore to request that you will be pleased to move the Lords Commissioners of the Admiralty to give the necessary directions accordingly.

We have, &c.

(signed) *Edward & Robert Scott.*

(No. 29.)

12 March:

ADMIRALTY MINUTE.

Inform Captain Ross, that 60,000 feet of limestone being wanted, a reference be made to Messrs. Scott whether they are inclined to supply the additional quantity of 30,000 *on the same terms,* and if so, to make the contract accordingly.

(No. 30.)

12 March:

The Admiralty to Captain Ross.—(Abstract.)—The Admiralty have received from Messrs. Scott a letter, stating their wish to supply 30,000 feet of limestone more, which,

1835.
12 March—*continued.*
which, it is understood from Mr. Stuart, will be required in the course of the year. Captain Ross is to call upon them to state whether they are willing to supply that further quantity *on the same terms*, and if so, is to extend the contract accordingly.

(No. 31.)

12 March:
The Admiralty to Messrs. Scott.—(Abstract.)—Direct Messrs. Scott to communicate with Captain Ross on the subject of a further supply.

(No. 32.)

14 March:
Captain Ross to Messrs. Scott.—(Abstract.)—Mr. Stuart having reported to the Admiralty that 30,000 feet of limestone will be required for the service of the Breakwater in the course of the present year, in addition to the quantity stipulated to be delivered by your contract of the 10th instant, I request you will inform me whether you are willing to supply that further quantity *on the same terms, or at a lower rate. See Evidence, Question* 719.

(No. 33.)

14 March:
LETTER from Messrs. *Scott* to Captain Superintendent *Ross.*

Sir, Plymouth, 14 March 1835.

In reply to your letter of this day's date, requesting to be informed whether we are willing to supply an additional 30,000 feet of limestone for the service of the Breakwater, in the course of the present year, *on the same terms, or at a lower rate* than the quantity stipulated to be delivered by our contract of the 10th instant;

We beg leave to acquaint you, that as our foreman at the quarries has just stated that our workmen had manifested a disposition to follow the example of a neighbouring quarry, and strike for an increase of wages, and we have thought it prudent to grant them a small advance to prevent the entire stoppage of our works, we do not think that we should, at the present moment, be justified in naming a less price than before, but that we are perfectly ready and willing to supply 30,000 cubic feet more *on the same terms as before*, and which is 1¾*d.* less per foot than was ever paid for any similar contract.

(No. 34.)

15 March:
Captain Ross to the Admiralty.—(Abstract.)—Transmits the reply of Messrs. Scott (No. 33), together with their original and amended tenders; suggests that their contract of the 10th of March may be amended accordingly; or in case a new contract be necessary for the additional quantity, that the requisite stamps may be forwarded for that purpose.

The enclosures in No. 34 were the tender of the 17th February, at 8¾*d.*
Ditto - - - - - - - - 20th - - at 8*d.*
And their letter of the 14th March, (No. 33.)

(No. 35.)

18 March:
The Admiralty to Captain Ross.—(Abstract.)—Messrs. Scott's offer for a further quantity of 30,000 feet is approved of, and they have directed the Storekeeper-general to send a new contract and stamps to be executed *for the whole quantity.*

(No. 36.)

18 March:
The Admiralty to the Storekeeper-general.—(Abstract.)—To send new forms of contract to Captain Ross, to be executed by Messrs. Scott, for a further supply of 30,000 feet of limestone, according to the accompanying tender, (No. 33.)

(No. 37.)

18 March:
The Storekeeper general to Mr. James.—To the same effect as the preceding.

1835. (No. 38.)

20 March:

The Storekeeper-general to Captain Ross.——(Abstract).—Refers to Captain Ross's letter of the 15th, addressed to the Admiralty; and sends stamped forms of bond, and contract for *an additional supply of* 30,000 *feet*, agreeably to the accompanying tender of the 14th, (No. 33.)

(No. 39.)

26 March:

Captain Ross to the Admiralty.)—(Abstract.)—Pursuant to the Admiralty Order of the 18th, he has entered into a new contract with Messrs. Scott for the whole quantity, 60,000 feet; he transmits the contract and bond, and reminds their Lordships that the instruments of the 10th became cancelled by that measure.

(No. 40.)

4 April:

Mr. Innes, of the Admiralty, to Mr. James, of the Contract Office, Somerset House.—(Abstract.)—States that Mr. Johnson is at the Contract Office, to sign his contract for granite.

(No. 41.)

6 April:

Mr. James, of the Contract Office, Somerset House, to Mr. Dent, clerk at Captain Ross's Office, Plymouth Dock-yard.—(Abstract.)—Announces supposed variance between the price of limestone, as tendered for by Messrs. Scott, and the price in their contract of the 26th March.

(No. 42.)

8 April:

Mr. Dent to Mr. James.—(Abstract.)—Mr. Dent explains the transaction.—*See Evidence, Question* 1230.

(No. 43.)

13 April:

Captain Ross to Messrs. Scott.—It having been explained by Mr. Dawson to the Storekeeper-general, that, in agreeing with them for the supply of limestone, it was intended to accept the reduced offer of 8*d.* for the whole quantity, your contract is returned, for the purpose of being altered accordingly; and I request you will signify whether you are willing to adhere to these terms, and to authorize the alteration of price.—*See Evidence, Question* 735.

(No. 44.)

14 April:

Messrs. *Scott* to Captain *Ross.*

Sir, Plymouth, 14th April 1835.

In reply to your letter of yesterday's date, stating that our contract for the supply of limestone for the use of the Breakwater had been returned, for the purpose of having the price altered, as it was the intention of the Admiralty Board to accept our reduced offer of 8*d.* per foot for the whole quantity, and requesting that we would signify to you whether we were willing to adhere to these terms, and to authorize the alteration of price; we hope that you will, in justice to ourselves, permit us to remind you, that we expressly stated the same fact, and contended that our offer was 8¾*d.* for 30,000 cubic feet, or 8*d.* per foot for 60,000 cubic feet; but as the Board had omitted to say that they had accepted our amended or reduced tender for 60,000 feet, you considered that their Lordships intended only to engage for the lesser quantity, at 8¾*d.* per cubic foot, and the contract was executed accordingly. About a week afterwards, however, you desired us to state, in compliance with the wish of the Board, whether we were willing to double the quantity of limestone at the same or a less price than the former contract; but as the masons and labourers at the quarries had demanded and obtained an increase of wages, we could not then afford to renew our former offer, and therefore informed you that we did not feel justified in attempting it; but that we were still willing and ready to supply 30,000 feet more on the same terms as before, and which was 1¾*d.* per foot less than what had been paid to former contractors. The Board, in reply, accepted our tender on these terms, and another contract was entered into for the 60,000 feet, and for which we paid the additional stamps. We really do not think, therefore, that the Board has any reason to complain, as in the interim of signing the two contracts, we were ourselves compelled to pay our workmen three farthings more per foot for the stone. But, notwithstanding all this, if the Board after this explanation desire

1835.
14 April—*continued.*

desire it, from an apprehension that blame might otherwise be imputed, most readily would we agree to sacrifice ten times the amount to prevent it.

We remain, Sir, your obedient humble Servants,

To Captain Superintendent Ross, &c. &c. &c. (signed) *Edward* & *Robert Scott.*

(No. 45.)

15 April:

Mr. *Dent* to Mr. *James.*

Dear Sir, Dock-yard, Devonport, 15th April 1835.

Messrs. Scott having, under the explanation given in your note to me of the 11th inst., consented to the price in their contract for limestone, dated 26th ult., being altered from 8 ¾ *d.* to 8 *d.* per foot, the same has been done accordingly, and the papers are herewith returned to you, accompanied by the contractors' letter on the subject, which it may be advisable to preserve with the contract, to account for an alteration having been made in an executed instrument, and in a demi-official manner.

I am, dear Sir, very faithfully yours,

John James, Esq. (signed) *D. Dent.*
Contract Office, Admiralty, Somerset House.

(No. 46.)

CONTRACT entered into by Messrs. *Scott.*

Contracted and agreed upon, the 26th day of March, in the year of our Lord 1835, by and between Edward Scott and Robert Scott, of Plymouth, in the county of Devon, brewers and copartners, of the one part, and Charles Bayne Hodgson Ross, Companion of the Bath, Captain Superintendent of His Majesty's Dock-yard, Plymouth (for and on behalf of His Majesty, His heirs and successors), of the other part, as follows: that is to say, the said Edward Scott and Robert Scott do for themselves, their executors and administrators, hereby covenant, contract and agree to and with the said Charles Bayne Hodgson Ross, party hereto, free of all charges to His Majesty, to supply and deliver into the custody of the officer or officers now appointed, or hereafter to be appointed to superintend the formation of a Breakwater in Plymouth Sound, at some convenient wharf or wharfs in Catwater, in the port of Plymouth, in the said county, as shall be approved of by the said officer or officers, about 60,000 cubic feet of limestone, the same to be deposited on the edge of the said wharf or wharfs, so as to admit of being readily transported thence by vessels to the Breakwater.

In consideration whereof, the said Charles Bayne Hodgson Ross doth hereby, for and on behalf of His Majesty, promise and agree that the said Edward Scott and Robert Scott, their executors or administrators, shall be paid for such limestone at and after the following rate: that is to say,

Limestone for casing the south slope top and north slope of part of the west arm of the Breakwater, similar in thickness to those already set in the finished work, not to be less than three feet long, and from four to five feet in depth of bed, and to be dressed according to the specimen exhibited marked (G.), 8 ¾ *d.** per foot cube.

* Altered to 8*d.* on the 14th of April.

And the said Edward Scott and Robert Scott do, for themselves, their executors and administrators, also covenant and agree, that all the said limestone shall be fair-dressed on the face and well squared, that the beds and joints shall have a chisel draught all round, be hammer or pick-dressed between, out of winding, and straight, so that they may bed solidly on each other, and be close in the joints; also that the said stone shall be dressed to such form as described in the Schedule hereunto annexed, or according to such other forms as the said officer or officers shall from time to time direct; and further, that all the said limestone shall be measured and paid for according to the net cubical contents when worked to the several forms required, without any allowance for waste, dove-tailed work, or on any other account.

And also that all the said stone shall be good, sound, merchantable, well-conditioned, conformable in every respect to the specimens approved of by the said officer or officers, free from rents and shakes and all other defects, such as shall be approved of by the said officer or officers, and in every respect fit for His Majesty's service. And in case of any stone being delivered which, from defects, inferior quality, improper workmanship, or not being of the correct forms and sizes required by the schedule and specimens, shall be refused by the said officer or officers, it is hereby covenanted and agreed upon, that the same shall be removed and taken away by the said Edward Scott and Robert Scott, their executors or administrators, at their own expense; and if not so removed and taken away within eight days after notice given to the said Edward Scott and Robert Scott, their executors or administrators, or some or one of them, of such stone having been so refused as aforesaid, the said officer or officers shall have power and be at liberty either to return such rejected stone, and to charge all expense incurred thereby to the said Edward Scott and Robert Scott, their executors or administrators, or to apply and appropriate the same to such use or uses

as the said officer or officers may think proper, without any payment or allowance for the said stone being made to the said Edward Scott and Robert Scott, their executors or administrators.

And it is hereby covenanted and agreed upon, by and between the said parties, that in case the said Edward Scott and Robert Scott, their executors or administrators, shall fail or make default in supplying and delivering the whole quantity of limestone hereby contracted for by the end of September in the present year, in such proportions and at such periods as may be required by the said officer or officers, and the said officer or officers shall thereby find it necessary to purchase other stone in lieu thereof, then and in such case the said Edward Scott and Robert Scott, their executors or administrators, shall pay all extra expenses incurred thereby (over and above the sum of 500*l.* hereinafter mentioned as stipulated, or ascertained damages for the breach of this contract), or have the amount thereof deducted and abated from any bill or bills which may be made out to them in pursuance of this contract.

And the said Edward Scott and Robert Scott do, for themselves, their executors and administrators, covenant and promise that with every delivery of limestone which shall be made in pursuance of this contract, there shall be sent in duplicate a bill of parcels for the same (the duplicate to be returned to him or them as hereinafter mentioned), and that every claim of payment for the deliveries under this contract shall be made by invoices (according to a form to be obtained from the Lords Commissioners of the Admiralty), to be lodged in the office of the Accountant-general of the Navy, by the said Edward Scott and Robert Scott, their executors or administrators.

And the said Charles Bayne Hodgson Ross doth hereby, for and on behalf of His Majesty, further covenant and agree, that upon every delivery of limestone under this contract, the officer or officers hereinbefore mentioned shall insert the quantities received by them in the duplicate bill of parcels to be sent therewith, as hereinbefore mentioned, and return every such duplicate bill to the said Edward Scott and Robert Scott, their executors or administrators; and that whenever and so often as the value of the quantities of limestone so delivered and made received shall amount to 200*l.*, a bill for that amounts hall forthwith be made out to the said Edward Scott and Robert Scott, their executors or administrators, payable at sight, by the Treasurer of His Majesty's Navy, each and every such bill being to be considered final as to the value of the several items therein contained.

And the said Edward Scott and Robert Scott do also covenant and promise, that they will not give, or cause to be given, to any person whomsoever employed in His Majesty's service, or to any person or persons on their or any of their behalf, or for their or any of their use, any fee, gratuity or reward, for any favour shown to them in relation to this contract, on any pretence whatever, on account thereof; and that with the first and last delivery of limestone they will deliver to the said officer or officers a written declaration, signed by themselves, that they have not promised, given or caused to be given, any money, bond, bill, note or other security for money, or anything whatever by way of fee, gratuity or reward, contrary to the covenant last above-mentioned.

And the said Edward Scott and Robert Scott do, for themselves ,their heirs executors and administrators, also covenant, contract and agree to and with the said Charles Bayne Hodgson Ross, or the superintendent for the time being of the said yard, that they the said Edward Scott and Robert Scott shall not and will not, at any time or times, during the continuance of this contract, transfer or assign the same, or any part, share or interest of, in or to this contract, or cause or procure this contract, or any part, share or interest of, in or to the same, to be transferred or assigned to any person or persons whomsoever, without the authority and approbation of the Commissioners for executing the office of Lord High Admiral of the United Kingdom for the time being, which authority and approbation shall be of no avail unless the same, together with the assignment of the part, share or interest (which assignment it shall and may be lawful for them, with such authority and approbation as aforesaid, to make and execute), be endorsed hereon, or annexed hereto, and regularly signed in the presence of a credible witness by two of the said Commissioners, and by them the said Edward Scott and Robert Scott, and by the person or persons to whom this contract or any part, share or interest of, in or to the same, shall or may have been so transferred or assigned.

And if the said Edward Scott and Robert Scott, their executors or administrators, shall at any time make, do, execute, commit or willingly or knowingly suffer any act, deed, matter or thing whatsoever, whereby or by reason or means whereof, this contract or any part, share or interest of, in or to the same, is, can, shall or may be transferred or assigned, without the authority and approbation of the said Commissioners, and without such indorsement made hereon or annexed hereto, and signed as aforesaid, then and in such case the said Edward Scott and Robert Scott, their executors or administrators, shall pay the sum of 500*l.* by way of liquidated damages to the said Commissioners; and moreover in such case it shall and may be lawful to and for the Commissioners for executing the office of Lord High Admiral of the United Kingdom for the time being, by writing under the hands of any two of them, or under the hand of the Secretary of the Admiralty for the time being, directed to the said Edward Scott and Robert Scott, or the survivors or survivor of them, or the legal representatives or representative of the last survivor, to declare this contract to be dissolved and become absolutely null and void; and that on the delivery of such last-mentioned writing to any one of them the said Edward Scott and Robert Scott, or to such survivor or representatives or representative as aforesaid, or leaving the same at their or his last places or place of abode respectively, this present contract and every article, clause, matter

matter and thing herein contained, shall from thenceforth be dissolved and become absolutely null and void to all intents and purposes whatsoever.

And the said Edward Scott and Robert Scott do, for themselves, their heirs, executors and administrators, further covenant, contract and agree that whenever this contract, or any part, share or interest of, in or to the same, shall by the said Commissioners be allowed to be transferred or assigned to any person or persons whomsoever, they the said Edward Scott and Robert Scott, and any other person or persons to whom any transfer or assignment of any part, share or interest of and in such contract may have been before made, shall and will, prior to such transfer or assignment being made, produce to the said Commissioners an affidavit, made by himself or themselves, as the case may require, that he or they hath not or have not, at or before the time of making such affidavit, taken, received or derived, and that he or they will not at any time thereafter take, receive or derive, either directly or indirectly, any profit, emolument, recompense or reward for, or on account of, or by reason or means of any such transfer or assignment.

And the said Edward Scott and Robert Scott do, for themselves, their heirs, executors and administrators, likewise further covenant, contract and agree to and with the said Charles Bayne Hodgson Ross, that if this contract, or any part, share or interest of, in or to the same, shall at any time be transferred or assigned to any person or persons as aforesaid, that in such case they the said Edward Scott and Robert Scott shall and will, notwithstanding such transfer or assignment, be responsible for the due and faithful execution hereof by the person or persons to whom such transfer or assignment may be made; and in case such last-mentioned person or persons shall fail or neglect to comply with the terms of this contract, or any part thereof, they the said Edward Scott and Robert Scott do hereby covenant with the said Charles Bayne Hodgson Ross, or the superintendent of the said yard for the time being, to be accountable and to answer for and make good the same, in like manner as if no such transfer or assignment had taken place.

And in pursuance of the directions contained in a certain Act of Parliament made and passed in the 22d year of the reign of King George the Third, intituled, "An Act for restraining any Person concerned in any Contract, Commission or Agreement made for the Public Service, from being elected, or sitting and voting as a Member of the House of Commons," it is hereby expressly declared and agreed, and these presents are upon this express condition, and the said Edward Scott and Robert Scott do covenant, for themselves, their heirs, executors and administrators, that no Member of the House of Commons shall be admitted to any share or part of this contract or agreement, or to any benefit to arise therefrom.

And lastly, for the due and faithful performance of all and singular the covenants, conditions, provisoes, clauses, articles and agreements hereinbefore contained, which on the part and behalf of the said Edward Scott and Robert Scott, are or ought to be observed, performed, fulfilled or kept, the said Edward Scott and Robert Scott do hereby bind themselves, their heirs, executors and administrators, unto our Sovereign Lord the King, in the sum of 500*l.* of lawful British money, to be paid to our said Lord the King, his Heirs and Successors, by way of stipulated or ascertained damages, agreed upon between the said Charles Bayne Hodgson Ross and the said Edward Scott and Robert Scott (over and above such extra cost and expenses as hereinbefore mentioned), in case of the failure of the said Edward Scott and Robert Scott in the due execution of this contract or any part thereof.

It witness whereof the said parties to these presents have hereunto set their hands and seals the day and year first above written.

(signed) *Edward Scott.* (L. S.)
Signed, sealed and delivered (being first duly stamped) in the presence of (signed) *Robert Scott.* (L. S.)
(signed) *Charles B. H. Ross.* (L. S.)
(signed) *D. Dent.*

Appendix, No. 2.

DOCUMENTS produced by Mr. *Edward Scott* to prove that Twelve Feet of Limestone go to the Ton.

(No. 1.)

We, the undersigned owners of and occupiers of quarries, do hereby most distinctly state, that twelve feet of wrought limestone to the ton is the customary estimation in the trade, and by which all our calculations and transactions are governed.

Dated at Plymouth, this 21st day of August 1835.

I have supplied thousands of tons to Government at twelve feet cube per ton. } *Richard Cotton.*

I have, in conjunction with Mr. Cotton, always been paid for limestone at the rate of twelve feet per ton. } *John Keam.*

George Passmore. *John Passmore.*

(No. 2.)

(No. 2.)

I HEREBY declare, that all the wrought limestone which I have sold has been paid for at twelve cubic feet to the ton, and which is the customary estimation of the trade of this port.

Dated August 21st, 1835. *C. H. Ripath.*

(No. 3.)

I DO hereby declare, that all the wrought limestone which I have ever sold for the use of the Breakwater at Plymouth has been paid for at the rate of twelve cubic feet to the ton, and which is the customary estimation of the trade.

Dated 21st August 1835. *John S. Edwards.*

(No. 4.)

WE the undersigned owners of quarries, having been upwards of thirty years in the trade, do hereby most distinctly declare, that we have sold to different contractors thousands of tons of wrought limestone for the use of the Breakwater, Boveysand Pier, and the Dock-yard Jetty at Devonport, which has invariably been estimated at twelve feet to the ton, and paid for accordingly; and, in confirmation of this statement, we beg to say, that we have always paid our workmen at the same rate of twelve feet per ton, according to the uniform and customary calculation of the trade.

Dated at Plymouth, this 21st day of August 1835. *Benjamin Sparrow.*
Peter Simons.

12 5

REPORT

FROM THE

SELECT COMMITTEE

ON

CONNAUGHT LAKES;

WITH THE

MINUTES OF EVIDENCE.

Ordered, by The House of Commons, *to be Printed,*
3 *July* 1835.

Martis, 2° die Junii, 1835.

Ordered, That a Select Committee be appointed to inquire into the Practicability and Public Advantage of making a Navigable Inland Communication between *Galway* and *Castlebar*, through the Lakes *Corrib*, *Mask*, and *Carra*; between *Westport* and *Castlebar*, through Lake *Rakios*; and between *Ballina* and *Castlebar*, through the Lakes *Conn* and *Cullin*.

And a Committee was appointed, of—

Mr. Dominick Browne.	Lord Viscount Clements.
Mr. Cooper.	Mr. Ewart.
Mr. French.	Mr. Martin (of Sligo.)
Mr. Bodkin.	Lord Stanley.
Sir William Brabazon.	Mr. O'Connell.
Mr. Perceval.	Sir Frederick Trench.
The O'Conor Don.	Mr. Smith O'Brien.
Mr. Martin (of Galway.)	Lord Viscount Milton.
Mr. Lynch.	Mr. Harcourt.
Mr. Blake.	Earl of Kerry.
Mr. Chancellor of the Exchequer.	Lord Viscount Morpeth.
Sir Robert Peel.	Mr. Ormsby Gore.

Ordered, That the Committee have power to send for Persons, Papers and Records.

Ordered, That Five be the Quorum of the Committee.

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REPORT.

THE SELECT COMMITTEE appointed to inquire into the Practicability and Public Advantage of making a Navigable INLAND COMMUNICATION between *Galway* and *Castlebar*, through the Lakes *Corrib*, *Mask*, and *Carra*; between *Westport* and *Castlebar*, through Lake *Rakios*; and between *Ballina* and *Castlebar*, through the Lakes *Conn* and *Cullin*; and who were empowered to report their Observations thereupon to The House, together with the MINUTES OF THE EVIDENCE taken before them;——HAVE agreed to the following REPORT.

YOUR COMMITTEE, believing that but little is accurately known of the Lakes of Galway and Mayo, have considered it best to confine their Examination to the only Witnesses who have any scientific knowledge of their Levels and Navigation. Your Committee consider the Map which they have directed Mr. Bald, the Engineer, to construct, and which is annexed to this Report, the best *primâ facie* evidence of the practicability of the Navigation of these Lakes.

These Navigations may be divided into four parts:

1. From the Sea at Galway to Lough Corrib, Loughs Mask and Carra.
2. From the Sea at Ballina to Loughs Conn and Cullin.
3. From the Sea at Westport to the Lakes at Castlebar.
4. The Union of these three before-mentioned Navigations.

Detached Navigations already exist:

No.	Miles.	
1. From the Town of Galway to Lough Corrib	3	
2. In Lough Corrib	22	& 12 Miles West.
3. In Lough Mask and Lough Carra	9	6 Miles East.
4. Along Ayle River	7	
5. In Castlebar, or Rahin's Lakes	7	
6. Along Turlough River	5½	
7. In Loughs Cullin and Conn	11	
8. Detached parts of the Moy, from Lough Cullin to Ballina, about	5 Miles.	
Direct Navigation	64½	23 Branch Navigation.

To unite these detached Navigations, the *First* in importance is from the Sea to the North of the Town of Galway. This Canal has been laid out by the late Mr. Nimmo, and is now under consideration by the Board of Works of Ireland; its length is about the third of a mile:

this may be the junction of the proposed extension of the Grand Canal from Ballinasloe to the Sea. The next is from Lough Corrib to Lough Mask, a distance of $2\frac{3}{8}$ miles, with a difference of level of 36 feet.

These two complete the *First* Part of the Proposed Navigations.

The *Second* Part is from the Sea to Lough Conn, a distance of $3\frac{5}{8}$ miles, with a difference of level of 27 feet; which may eventually be part of the prolongation of the Royal Canal to the Sea.

Necessarily connected with this is the improvement of the Tidal Navigation of the Moy, from the Sea to Ballina, a town daily improving in every respect, and having already a population of 10,000 inhabitants.

In reporting upon this Branch of the Navigation submitted to the consideration of Your Committee, it is considered an important object to be noticed, that the Moy, the largest River in Mayo, which passes from Lough Cullin to Ballina, through the town of Foxford, and through a rich and fertile country, could be made navigable at small expense, which would tend considerably to the general advantages of the proposed Improvements.

The *Third* Part is from the Sea at Westport Harbour to Castlebar, four miles of Canal Navigation, with a difference of level of 92 feet, to join the Lakes Navigation at Kigala. The Harbour of Westport is capable of being much improved by a small outlay of money.

The *Fourth* Part, *viz.* the Union of these three Navigations, comprising a Canal of three miles, from the Lakes of Castlebar to Coolodge Lake, and the improvement of the Ayle River, into Lough Mask, connecting the First and Third Parts.

And from Castlebar to Turlough, a Canal of four miles, with 65 feet difference of level, and the Improvement of the Turlough River $5\frac{1}{2}$ miles into Lough Cullin, connecting the Third and Second Parts.

The lines of these Canals, about 17 miles, uniting upwards of 80 miles of natural Navigation, are only known as far as their levels are concerned, and therefore Your Committee have not attempted to inquire into any Estimates of their probable expense; but it sufficiently appears to Your Committee that the country through which they pass is well furnished with all the necessary materials for constructing suitable works to make them efficient.

It appears by the Evidence, that these Lakes, stretching in all directions not less than 80 miles, now navigable with extreme difficulty by ordinary boats, depending on wind, are peculiarly adapted to Steam Navigation. The ordinary depth is not probably less than seven feet, and there is an ample supply of turf fuel along their borders, which would work the Steam-engines at a very moderate expense.

Your Committee consider it sufficiently proved that the country around these Lakes and Rivers, and proposed Canals, is productive of all those articles that are heavy, and the carriage of which absorbs a great part of their value, such as Corn, Potatoes, Hay, Turf, Lime, Marl, Granite, Marble, Sandstone, Limestone, Slates, Brick Earth, &c. &c.

The transport of all these articles now existing in that country at this moment costs about 6*d.* a ton per mile, which could be done by Steam Navigation

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Navigation at a sixth of the expense, adding most materially to their value when exported or sent for use to the Seaports or Inland Towns, particularly from places far from the Sea.

Your Committee, relying on the case made out by the inspection of the Map annexed, and the Evidence, most strongly recommend that an immediate Survey and Soundings be made of these Lakes, and an Examination of the best Lines of their communication with the Sea at Galway, Ballina and Westport, and between those Lakes; also, Estimates of the Expense of the Canals, Improvement of the Navigations of the Lakes, by removing Obstructions and placing Beacons, and of the Improvements of the Rivers which would form parts of the general Navigation.

Your Committee cannot but believe that the comparatively small expense of making this Survey would be amply repaid by the satisfaction of the Public at knowing how far these Navigations would be found practicable and advantageous, on scientific examination.

3 *July* 1835.

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MINUTES OF EVIDENCE.

Veneris, 12° *die Junii*, 1835.

RIGHT HON. DOMINICK BROWNE, IN THE CHAIR.

William Bald, Esq., called in; and Examined.

1. WHAT are you?—A civil engineer.
2. Where do you reside?—In Dublin.

3. Have you been engaged in many public works in Ireland?—I was first employed to make a trigonometrical survey of the county of Mayo; I was also employed by the Commissioners to inquire into the practicability of the drainage and improvement of the bogs in Ireland, of which I finished three districts west of the Shannon, embracing an extent of nearly 200,000 acres of bog soil; I was also generally employed to lay out various roads in the western district, to an extent of 250 miles; since which I have been employed by the Board of Works in Ireland to direct the execution of the Antrim Coast Road: I was also engineer to the Commissioners for building a bridge over the River Bann, in the north of Ireland; I am also at present engaged, as directing engineer, in deepening and improving the harbour and port of Drogheda; also the great road, now making under the direction of the Board of Works, extending from Kenmare, across the ridge of the Caha mountains, to Bantry Bay, which will connect the towns of Bantry and Kenmare, and also the southern and western districts of Ireland; I was also employed to report upon the practicability of making a rail-road from Limerick to Carrick-on-Suir, near Waterford; I also, last summer, designed and laid out 36 miles of a new mail-coach road, by order of the Postmaster-general, from the town of Antrim to the town of Coleraine; and I have been employed in several other public works.

4. You are well acquainted with the large lakes in Mayo and Galway?—Yes, I am. I took the levels of Lough Corrib over the sea; I also determined the levels of Lough Mask, of Lough Carra, the Loughs of Castlebar; also Lough Conn, which stretches across the province of Connaught from Galway Bay to Ballina, from south to north.

5. Do you consider that these lakes might be advantageously made navigable?—They are already navigable.

6. What is the extent, in English miles, between the sea at Galway and the sea in Killala Bay?—By taking all the separate cuts, with the lakes and rivers, I have made the length 80 British miles, including the Westport branch.

7. Could the navigation of those lakes be joined advantageously?—They could; Lough Corrib being 14 feet above the sea, and Lough Mask 50. These lakes are separated by a limestone country, two miles and three furlongs in breadth at Cong, under which the waters of Lough Mask flow to Lough Corrib by subterraneous passages, and which is peculiar to limestone countries: to connect these lakes, it would be necessary to cut through a part of the limestone isthmus which separates them, having four locks at the entrance on Lough Corrib side, which would float the boats through upon the level of the waters in Lough Mask. This single work would connect together three of the largest lakes in the west of Ireland; viz. Lough Corrib, Lough Mask, and Lough Carra, whose united area presents an atmospheric surface of 64,000 acres; a coast of nearly 200 miles, bordering on a fertile country, and giving a direct navigation into the centre of the

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province of more than 40 miles: the towns of Galway, Cong, Headford and Ballinrobe would be all connected by this single operation, which would open a wide and extensive field to steam navigation, by which all the produce of that fertile country would be cheaply and quickly sent to market, and a return or a back-carrying trade of all kinds of articles required for home consumption, such as iron, wood, salt, &c. &c.; and also for the introduction of shell-sand and coral-sand, and seaweed for the reclamation of the highly improvable districts which lie adjacent to the rivers and borders of these extensive lakes.

8. Are these lakes generally deep enough for steam navigation?—These lakes are sufficiently deep for all the purposes of steam navigation; and although they are at present with difficulty navigated by ordinary boats, depending upon wind, and particularly where horse-power cannot be applied, yet they are extremely well calculated to all the purposes of steam-boat navigation; and along the borders of the lakes and rivers are extensive bogs; turf fuel can therefore be procured in abundance, and cheap, to work the steam-engines to any extent that may be required. But it would be a most desirable object to have them sounded, and the channels of navigation marked, and the sunken rocks or reefs beaconed: it would also be most useful to obtain the area of each lake within its summer limit when the waters are low, and also the area within the winter or flood line, *i. e.* the summer and winter basins, and the summer and winter levels of their waters, so that the quantity of ground subject to flood might be known; also its present value, so that perhaps some plan might be devised for rendering those lands more productive than they are at present; or how far it might be carried into execution, or found practicable, having the waters under full government or command, to irrigate to a greater extent, and to a higher level, the low grounds which lie adjacent to the rivers which discharge themselves into these lakes and along their borders; also how long the waters generally lie on the low lands.

9. Have you proposed to connect Lough Corrib with the sea?—I did not touch upon that; I have merely mentioned that Lough Corrib, being 14 feet above the sea, it would be a very easy matter to connect it with the harbour or bay of Galway; a plan has already been in progress for doing so.

10. That has been surveyed by other persons?—It has.

11. Will you state your opinion to the Committee as to the connexion of Lough Corrib with the sea?—I am not able to point out the exact line of the canal, as there may be two, which would require separate and distinct examinations.

12. State your general views?—Having taken the levels from the sea along the river of Galway to Lough Corrib, it appeared to me to be an easy and a simple operation to connect the waters of that interior basin with the ocean.

13. You have not looked to any particular lines by which you think this would be advisable?—No, no particular lines, except the line along the borders of the river flowing from the lake to the sea.

14. But it is a measure, you think, that might be very easily effected, and productive of great advantages?—Unquestionably, of the greatest public utility.

15. The advantage you mention, as likely to occur from connecting the navigation of the lakes, would be extended to the town of Galway, by connecting Lough Corrib with the sea?—Unquestionably.

16. Is there any disadvantage in having a canal pass through a town?—The passage of boats along a canal, which traverse or cross public streets in a town, must meet with interruption by the passing of carriages and carts, but that might be partly obviated by doing as the Dutch do in Amsterdam, and in the various towns of Holland, by having simple bridges, opening with a series of short timber shutters; the rigging of the masts are loosened and they pass through very narrow openings in the top of the bridges, not more than a yard wide, through which the mast passes; but the bridges under are sufficiently wide to permit the vessels that traffic on the canals to go through.

17. How do you propose that the navigation shall be prolonged from Lough Mask to Lough Carra?—These lakes are already connected, and on the same level nearly. There are two lines, one through Lough Carra and another by the river Ayle.

18. From Lough Mask?—From Lough Mask to Coolodge Lake, by the Ayle River, which might be improved by a little deepening, as Coolodge Lake is only 14 feet higher than Lough Mask (64 feet above the sea), two double locks, or four single ones, would join the Loughs of Castlebar, which are 92 feet above the sea, the distance across from Coolodge Lake being three miles. The Lakes of Castle-

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bar, when all connected, will embrace a surface of 1,500 acres; they are 22 in number, and would form the summit level between Galway Bay, Westport Bay, Ballina and Killala Bays; the Loughs of Castlebar extend in the direction of Westport, and, by some cutting at Kigala Lake, they might be all connected, and a lake navigation of nearly seven miles would be then obtained on one level, and which might be extended upon the same level to within a very short distance of the town of Westport, and might also be carried down to Westport Bay or Harbour, by locks. The summit level, going in the other direction towards Killala Bay, might be carried from Castlebar towards Lough Conn, to a distance of four miles; there would then be a summit level 16½ miles in length, fed by 22 lakes, containing 1,500 acres, as before mentioned. But in addition, the whole waters of the large river of Clydagh, and additional numerous lakes lying in the Barny-na-Gee mountains, might be added to the supply of the summit level, so that there would be more than an ample supply of water on the summit to answer all the purposes of trade, however extended it might hereafter become; and also for the purposes of machinery, if found necessary. Three double locks at Turlough would meet nearly the level of the waters of Lough Conn, which are 27 feet above the sea. At Turlough, the river might be deepened and straightened in its course to Lough Cullin, or by a separate and distinct canal, whichever would be found best; the distance along the river would be about five and a half miles from Turlough to Lough Cullin, which is an arm of Lough Conn; Lough Conn and Lough Cullin contain an area of 14,000 acres, 11 miles long, and a coast of 53 miles, bordering in many parts upon a most fruitful and productive country. From Lough Conn to Ballina the country is very flat and level, and the distance is three miles five furlongs. I would recommend a cut or canal to be made to Ballina, upon the same level as the waters of Lough Conn, with a regulating lock at the lake; indeed, several of the lakes will require regulating locks; and this navigation could be joined to the sea at Ballina by three locks, and a quantity of water could be obtained from Lough Conn, which would be equal to half the power of all the steam engines in the city of Glasgow.

19. What is the extent of the canal that will be necessary for this?—From Lough Corrib to Lough Mask, two and a half miles; from Coolodge Lake to Castlebar Lakes, or from Lough Carra to the same point, three miles; from Castlebar to Westport, about four miles. The lakes of Castlebar extend more than half the distance; Castlebar to Turlough, four miles; Lough Conn to Ballina, three and a half miles; total, 17 miles, exclusive of the canal from Lough Corrib to the sea at Galway.

20. Are you speaking of English miles?—Nothing but English measure in every instance.

21. Have you taken the levels?—I have. When I was engaged in the survey for the drainage and improvement of the bogs of Ireland, I carried a series of levels from Galway Bay to Lough Corrib, Lough Mask and Carra, and across to the Lakes of Castlebar; also from Westport Bay to the lakes of Castlebar, and from Lough Conn to Turlough and to the lakes of Castlebar, joining the three series together.

Lunæ, 15° *die Junii*, 1835.

RIGHT HON. DOMINICK BROWNE, IN THE CHAIR.

William Bald, Esq., called in; and further Examined.

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22. WILL you proceed with the statement you were making to the Committee at its last meeting?—I believe I finished the statement or description of the river, canal and lake navigation from Galway Bay to Killala Bay, by Loughs Corrib, Mask, Carra, Coolodge, Lakes of Castlebar, Lough Cullin, Lough Conn, and to Ballina and the sea at Killala Bay. This navigation would connect the towns of Ballina, Foxford, Westport, Castlebar, Ballinrobe, Headford, Cong and Galway; and would pass through a country possessing a population of not less than 800,000 inhabitants,

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bitants, more than all the population of the districts which were traversed by the Caledonian Canal in Scotland. The districts of the Highlands are mountainous and hilly, and by no means to be compared to the low, rich and improvable districts which this lake, river and canal navigation would open up.

23. What would be the average expense of the locks on this canal you propose?—Without making out sections and detailed estimates, it would be difficult for me to say exactly.

24. Would it be 1,000 *l.* a lock?—I should think it would be more.

25. Would it be 1,500 *l.*?—Not less than 1,500 *l.* a lock.

26. Not less perhaps than 2,000 *l.*?—It would not be under 1,500 *l.*, as the navigation would be carried on by steamers; but there is an abundance of most excellent materials fit for any kind of engineering works that might require to be constructed.

27. What do you conceive the locks on the Caledonian Canal to be?—Some of them cost not less than 20,000 *l.*; some of them are 180 feet long, 40 feet wide, and eight feet rise, with 20 feet depth of water.

28. What kind of coast is Mayo and Galway?—The sea shore embraced between Galway on the south, where this lake and river navigation would commence, to Killala Bay, where it would end, on the north, includes many hundred miles of coast, including isles which this inland navigation would possess on its Atlantic frontier, and in which are situated numerous harbours, many of them safe and commodious to all classes of trading ships.

29. How many miles would the direct course of a ship be?—If the wind was even fair, and her course direct the whole way, the distance is not less than 190 miles.

30. How many harbours are there from Galway Bay to Killala Bay, fit for shipping?—

Broadhaven Harbour.
Blacksod ditto.
Tulloghan ditto.
Inish Kea ditto, in moderate weather.
Clare Island ditto, ditto.
Achil Hole ditto.
Roe Island ditto.
Inish Goula ditto, three to five fathoms of water.
Inish Gort Harbour.
Dore Inish ditto.
Westport ditto.
Newport ditto.
Innisturk ditto, Clew Bay.
Innishturk Island, but not sufficiently sheltered, being an open bay; depth of water from two to five fathoms.
Killery Harbour.
Ballinakill Harbour.
Innishbofin Harbour, fit for vessels drawing 10 feet.
Claggan Bay.
Streamstown Bay.
Innisturk Sound.
Ardbear, or Clifden.
Bunowen, only for moderate weather.
Birterbuy, an excellent harbour.
Cruabeg Isles.
Ardbay.
Roundstone.
Casheen and
Kilkerran Bays.
Greatman's Bay.
Costello Bay.
Comus Bay.

31. Will this canal open much up?—This canal of 17 miles, (not including the canal from Galway to the sea,) will connect and open a lake and river navigation of 60 miles in length, with an extent of lake shores amounting to more than 250 miles, and a surface of inland waters to the extent of not less than 80,000 acres.

32. Do you not think this navigation may be divided into four parts advantageously?—I do.

33. Which do you think is the most material?—The most material, or what would be attended with the greatest public benefit or effect, would be that from the sea to Lough Corrib, Lough Mask and Lough Carra, which would open at once a navigation into the interior of more than 40 miles, and that could be accomplished by two canals, one at Galway the other at Cong.

34. Which do you think is the second in importance?—Lough Conn to Ballina.

35. And its communication to the sea?—Yes, at Ballina, and to be made navigable from Lough Cullen along the river as far as Turlough, which river is flooded in winter to above the bridge of Kilnacarra by the waters of Lough Cullin; this would open up a valuable navigation into the interior fertile country of nearly 20 miles, by a canal of about three and a half miles, taken from Lough Conn to Ballina and the sea.

36. What do you consider the third?—The third would be from Castlebar towards

towards Westport, by the lakes of Castlebar, which would connect the principal county town, and the fertile productive country behind it, with Westport Harbour in Clew Bay.

37. Have you prepared any estimate of the expense of the whole?—No; the whole line would require to be re-levelled from Galway Bay to Killala Bay, lakes sounded, maps and plans drawn, and estimates then founded on them.

38. How many miles would there be of that canal?—About 17 miles, which does not include from Galway to the sea, and 60 miles of lake and river navigation besides.

39. What is the fourth division, in point of value of communication?—It is the connexion of these navigations across from the Loughs of Castlebar to the Ayle River, which flows into Lough Mask, or to Lough Carra.

40. And of course from Castlebar to Turlough?—Yes.

41. What class of vessels can now sail up to Ballina?—No vessels sail up to Ballina, because the bed of the Moy River is barred across by a ridge of limestone strata, about half a mile below the town; but vessels of about 90 tons burden, and not drawing more than 11 feet of water, can sail up to a small quay situated on the Sligo side of the Moy River, and is about one mile below Ballina. I think it would be extremely advantageous to the trade of this rising country, that ships should be enabled to sail up to the natural basin situated in the Moy, and which is at the bridge of Ballina. But it would be also above all very desirable to improve a portion of the channel of the lower part of the Moy River navigation, between the Pool and the end of Bertra Island: I do not know of any tidal river navigation in Ireland, where so much improvement could be effected at so moderate an expense, and be attended with so much benefit.

42. What is the largest vessel which would be able to trade on the proposed improved navigation of the Moy River?—I should suppose vessels drawing about 12 feet of water would be the largest.

43. How many tons?—About from 100 to 150 tons.

44. Would the Ballina or Moy River admit the navigation of a steam-boat of 40 tons burden?—Yes, and more, but not up to Ballina. I know of nothing that would be more beneficial to the whole of the country than to improve the tidal navigation of the Moy River at Ballina, so as to admit trading steamers from Glasgow and Liverpool.

45. Could a very large vessel reach Killala?—There is a bar at the entrance of the harbour, on which there is four feet of water only at low-water spring tides.

46. What is the largest class of vessels that come into Killala Bay now?—Ships of about 180 tons; but it depends very much on the state of the weather and the run of the sea, on account of the breakers on the bar; if it be moderate weather they can easily enter, but if it is rough it is difficult: it is very open to the north and north-west, which is sometimes a prevalent wind on that coast.

47. What is the water they want for the largest vessel?—I think the general draught of trading vessels on that coast, is about 12 feet.

48. Do you expect that this navigation would enable vessels trading to London to approach Killala Bay?—If the river navigation of the Moy below Ballina was improved, it would give much facility to all kinds of intercourse; but I beg to observe, that the Moy at Ballina and Killala Harbour are distinct ports. But this improvement would be of considerable public advantage to trading vessels in reaching Ballina, and which joins the proposed interior lake and river navigation at that town.

49. Is there not at this moment a very considerable export trade from Ballina to Liverpool and Glasgow?—Yes, a very considerable one.

50. Would that be increased?—Most unquestionably, by the improvement of the harbour.

51. Would it not also be improved by this excellent proposed interior lake and river navigation?—No doubt it would, extremely so.

52. Is there not also a considerable export trade from Westport?—There is a very considerable export trade from Westport.

53. To where, chiefly?—To Liverpool and Glasgow.

54. Are you aware of the great difficulties of communication between the interior of the country to those parts at this moment; the great expense of land carriage?—Yes, I am perfectly aware of it.

55. Are you not satisfied that an inland water communication would be extremely advantageous in conveying such bulky articles as corn to the seaports?—It would.

 56. Proceed

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56. Proceed with your statement generally as to these proposed navigations?—I have finished my statement in that line of country.

57–62. Do you not think that a map of these lakes would tend to show the advantage of a navigation more than any evidence in any other way?—Yes; distinct and accurate maps and charts, showing the depth of water in each lake, with the rocks, isles, and channels of navigation, would be very important and useful; also sections of the ground between the lakes, and also plans and sections of the rivers proposed to be improved, by deepening and widening; and the summer and winter levels of all the lakes and rivers, with the nature of the strata on the sides and bottom of them.

63. Do you know from memory how much higher is Lough Carra than Lough Mask?—It is nearly on the same level as Lough Mask, but in dry summers about six inches difference, and Lough Mask is 36 feet above Lough Corrib; Lough Mask is 50 feet above the sea, and Lough Corrib is 14 feet above the sea. The difference is 36 feet.

64. Do you know what is the general depth of water in Lough Mask?—I have never sounded Lough Mask.

65. Do you not know it is navigable almost throughout by boats?—I do know that Lough Mask is sufficiently deep for all the purposes of navigation; I am aware of it.

66. Are you aware that Lough Carra is generally navigable?—Yes, I am.

67. But both of these lakes are full of rocks, and dangerous?—Not to navigation, if beaconed, as I have already mentioned.

68. The rocks and dangerous places require to be marked?—Yes; I have given that in my evidence particularly.

Mr. *Alexander Nimmo*, called in; and Examined.

Mr. *Alexander Nimmo.*

69. ARE you acquainted with Lough Corrib?—Yes, a good deal acquainted with it.

70. It is very generally navigable, is it not?—It is navigable throughout the whole extent, 30 miles, from the sea at Galway.

71. How many English?—Forty-two English miles.

72. You are personally acquainted with the great part of the navigation?—Yes, particularly with the upper part.

73. State the part you are acquainted with?—I am better acquainted with the river at Maum; I am acquainted from Cong to the mountains of Joyce's country; I have been obliged to carry the stones of Maum Bridge by that means.

74. What size boats did you use?—Fourteen-ton boats, drawing between three and four feet water.

75. There is six feet water generally through the lake from Menlo to Cong, and Cong to Maum?—Yes, more than six feet of water, for boats drawing four feet of water could scarcely navigate in six feet in a swell, which sometimes occurs on this lough, with high winds.

76. There are many dangerous places, shoals and rocks, which require to be removed to make the navigation fit for steam-boats?—There are only two of great importance, Bulack and Newcastle.

77. Where are they situated?—One is four miles up the lake, four miles up from Galway.

78. Where is the other?—At Newcastle, at the town of Galway.

79. There is a considerable fall at Menlo?—It is not a very considerable fall at Menlo; it is navigable all the year round for boats drawing three feet.

80. What is the general aspect of the country adjoining Lough Corrib; what is the general nature of the country?—Near the shores of Lough Corrib there is a great deal of bog and limestone country, sometimes very rocky.

81. Would it not be very advantageous for the shores of Lough Corrib, to have the facility of having sea-weed brought up from the bay of Galway, without being taken out of one boat and put into another?—Of great advantage, and a great saving of expense in the trans-shipment and portage; and the boats from Roundstone and other bays could come down the shore, and be locked into the lake with their freight; they are generally boats of 10 tons burden, not drawing more than four feet; they could at once be sent to the upper part of the lake.

82. Would it not be very advantageous to the town of Galway to have the facility of procuring limestone and turf from the shores of Lough Corrib?—They

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are at present supplied, in a great measure, with limestone and turf from the shores of Lough Corrib; but if the navigation was improved, and better known, the limestone could be sent down cheaper, and to the upper part of the lake, where it is in great demand.

83. Would not the other matters of agricultural produce come along that navigation much more conveniently than at present?—If the navigation was improved, the quantity of manure drawn from the sea shore to the agriculturists of the country would be increased, and so would the produce.

84. Would it not come down the lakes in more quantity than at present, and facilitate the sale of the productions of the agriculturists of the country?—No doubt it would.

85. Previously to the introduction of steam navigation, do not you think it would be necessary to improve the navigation of that lake?—Decidedly. If a good survey was made of it, I have no doubt steamers would be put on it at once. A company was formed some time ago to navigate that lake by steam-boats, but found it very difficult to do so, on account of the want of knowledge of the lake.

86. Do you not consider a steam-boat or a tug-boat could draw down to Galway a great number of boats, with the different sorts of the produce of the shores of the lake, which at this moment get down with great difficulty through the uncertainty of the winds?—No doubt; the boats used on this lake are only capable of going before the wind; they are generally managed by two men, who, when a strong gale comes against them, cannot move at all. I have seen them stopped a fortnight in one place with a head-wind, and the poor fellows had nothing for their trip, being obliged to spend the freight.

87. You consider the lake as peculiarly adapted for steam navigation?—It is very well adapted for it.

88. Is there anything further occurs to you, as to the lakes, that you wish to mention to the Committee?—Yes. The improvement of this fine navigation, which, as I have said, extends about 40 English miles along a very fine corn country, into the heart of our highest mountains, and into one of our best sea-port towns, deserves more attention than it has yet received. A good chart, with soundings and sailing directions, should be published; the rocks and shoals beaconed and cleared, which could be done at little expense, the canal being now in progress of making from the sea. The lake occupies 30,000 Irish acres, and contains about 1,000 acres of the finest land on its islets. If such a navigation as this was in the United States of America, ere this you would have seen steamers plying about in all directions, carrying to the sea the produce of the land, and returning with goods to the various towns that would have risen on its banks.

Jovis, 18° *die Junii*, 1835.

RIGHT HON. DOMINICK BROWNE, IN THE CHAIR.

William Bald, Esq., called in; and further Examined.

William Bald, Esq.

18 June 1835.

89. THERE is another line of communication from Lough Cullin to the sea, besides that proposed through Lough Conn?—Yes; there is a line that might be taken from Lough Cullin to the town of Foxford: there is a fall at Foxford of the Moy River, which is considerable; afterwards there is an immense flat and winter-flooded basin, down towards Ballina. It might be worthy of an examination, in the event of any survey being made of that country, so as to form a navigation through it. From the fall below Foxford along the Moy to a distance of 10 miles, to the high-water line of the sea at Ballina Bridge, there might probably be a fall found of about 18 feet. But, however, it may be necessary to observe, that a considerable portion of the country on both borders of the River Moy, between Foxford and Ballina, is subject to inundation during the winter season; I should therefore

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18 June 1835.

therefore beg leave to suggest, that when an examination would be made of the flooded basin of the Moy River, between Foxford and Ballina, that a report should be made out at the same time, showing how far the country could be drained and the lands rendered more valuable, either by lowering the level of the winter-flood waters, or embanking the lands subject to it, combined with the navigation, or by a series of dams and sluices at the points of government on the river, giving full power and command of water to irrigate to a higher level and to a greater extent of country.

90. Do you know the line of country through which the direction of the Royal Canal takes westward?—I do; I have been at Tarmon Barry.

91. Has the possibility ever occurred to you of carrying on an extension of that canal through the counties of Roscommon and Mayo?—It has.

92. Would you mention the line you think most desirable it should pass through that part of the country?—There are two lines present themselves: one by the Upper Shannon, by Carrick, Lough Key, and to Lough Garra; the other is from the Carnado Water, through the country by Elphin into Lough Balla, thence to Lough Garra along the Lung, then in a southern direction to near the lakes of Urlaar, the town of Kilkelly southwards of Swinford, then along the vale of the Guishaden and Moy to the town of Foxford.

93. What would be the summit level of that line of canal?—About 290 feet above the sea.

94. What is the distance between Lough Garra and Lough Conn?—It is about 30 miles from Lough Garra to Foxford on the Moy, which joins the navigation already described, descending towards Ballina; but from the navigable part of the Lung River to Lough Cullin, about 26 miles.

95. And what is the highest summit level of the country upon that line?—About 290 feet.

96. What is the distance of Lough Bally to the Shannon, where the navigation of the river ends?—It is about 17 miles, and to Lough Garra three miles.

97. How many locks would it take to lock up 200 feet?—Twenty-five locks, with a rise of eight feet to each lock; but that depends upon the situation of the ground and the supply of water.

98. Do you consider the line you have just described as one likely, for the benefit of the country, to be carried into effect?—I do; when I first viewed the country and directed the levels to be taken over it, it appeared to me that an extension of the Royal Canal would be at some time carried across that country into the Moy Basin, and that it would be of the greatest public utility to the whole of that great and fertile district of country.

99. Should it not be taken into consideration, in the survey of these loughs, the navigation of the rivers flowing into them?—I should think it desirable that the rivers flowing into Lough Mask, Lough Corrib and Lough Conn, should be surveyed as far as they are navigable, particularly the rivers of Bealanabrack, Clare Galway River, the Black River, the Robe, the Deal River, the Curragh, the Oughterard, to Lough Carra, &c.

100. Now the communication between Castlebar and the shortest mode to the sea, you have said to be to Westport; do you conceive that any communication might be made also with Newport from Castlebar?—From the west end of the lakes of Castlebar, I conceive it would be a very desirable object, at all events, to examine the country to Newport, to see how far it would be practicable to extend the navigation to that town, or to connect it by a small railway.

101. What kind of harbour is there at Newport?—The harbour of Newport is a very good harbour, fit for ships drawing 12 feet of water, and opens out to Clew Bay, without being beset with any shoals or rocks. Newport is considered a good and safe harbour for trading vessels, and there is a very considerable export trade in corn from that town to Liverpool and Glasgow. Above Newport is situated a very large lake, called Lough Beltra, elevated above the sea 40 feet; it contains an area of about 1,000 acres, and is fed by numerous rivers and a catchment country or basin, containing about 50 square miles, or 32,000 acres; this great water power will one day become of much value, from its contiguity to the harbour of Newport. From Newport along the river to Lough Beltra is five miles; Lough Beltra is something more than two miles long, and from Lough Beltra, by Lough Lavalla, to Lough Conn, is very little more than six miles; the summit level between Lough Beltra and Lough Conn is about 142 feet above the sea, Lough Conn is 27 feet above the sea, and Lough Beltra about 40 feet above the sea.

If

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18 June 1835.

If the waters of Lough Beltra could, on the same level, be carried to Newport, there would then be one water level, including Lough Beltra, of seven miles in length; and if a small railway was made from Lough Beltra over to Lough Conn, there would then be a direct communication opened to Ballina, extending from Clew Bay to Killala Bay.

Mr. *Alexander Nimmo*, called in; and further Examined.

Mr. *Alexander Nimmo.*

102. HAVE you any knowledge of this country between Lough Corrib and Lough Mask?—Yes; I have been a good deal employed in the construction of roads for the Government in that district.

103. Did you lay out a road from Fairhill to Earlsport, in Lough Corrib?—Yes, I laid out a short line of road from Fairhill to Earlsport, for Lord Leitrim.

104. Is there not an extensive corn market at Fairhill?—There is a very considerable corn market at Fairhill, but I am not aware of the extent.

105. Is Earlsport a good site for a secure harbour, and would you recommend a quay to be built for exporting corn to the port of Galway?—Earlsport is naturally a good harbour, and with the expenditure of about 100 *l.* on a small landing quay, the bight would become of great use, in case of steamers being established on the lough.

106. Would it be of any use without steamers to other ports?—Yes, it would.

107. Are you aware that the lake is only one mile and a half from Fairhill, and that most of the corn brought there is sent to Westport by a land carriage of 25 miles?—I am aware that most of the corn on that side of the lake goes to Westport, and in many cases it is carried 10 or 12 miles along the shore of the lake, and then sent to Westport. If some small quays were built, and steam-boats established, I have no doubt that all the corn would go by the lake, and that the waste lands on the shores would soon be improved, and the corn trade increased.

108. Do you think, if small quays were built and steam-boats established, a town would soon spring up on the upper part of the lake?—I have not the least doubt of it. A question would arise as to which would be the best site for a town on this part of the lake; Maum has many advantages, being partly established and having the roads made; there is no doubt that the travelling to Westport would pass by it, and when steamers run on the lake, this would become the route from Westport to Galway. A good site could be found on Mr. St. George's property at the foot of Lackavery Hill, opposite Castle Kirk Island; from this point a good navigation could be formed, extending, in various branches, 10 or 12 miles, at little expense, if carried to the sea at Screeb, on the coast road, at the head of Comas Bay.

109. Where is Comas Bay?—It is on the coast of Galway.

110. Do you mean from Lough Corrib to Galway Bay?—Yes; the cut to be made is partly navigable by means of the lake and down the rivers.

111. Down what river?—Down Screeb River to Lough Ellan, and Shindela Lake to the Half-way House, which commands 20 miles of inland lake coast.

112. Have you considered what would be the best mode of making a navigation between Lough Mask and Lough Corrib?—I have not particularly examined the country with that view; I should think an open cut to Lough Mask is the best possible way of doing it, even if it is to be a canal navigation; but in America they are very much accustomed to portage between their lakes, that is, they have a short railway between two lakes; they land the passengers from the steam-boat off one lake on the railway, and re-ship on the other lake, without any inconvenience.

113. What is the height of the ground between Lough Corrib and Lough Mask?—I should think not 100 feet; the water of Lough Mask very frequently flows near the town of Cong.

114. Then you do not conceive a tunnel can by possibility be necessary?—I do not think a tunnel would be necessary.

115. Does the water ever go over land from Lough Mask to Lough Corrib?—It does not go over exactly all the way, but it comes near it: it is a limestone country; there is much broken ground.

Martis, 23° die Junii, 1835.

RIGHT HON. DOMINICK BROWNE, IN THE CHAIR.

William Bald, Esq. called in; and further Examined.

William Bald, Esq.
23 June 1835.

116. CAN you give the Committee any information relative to the navigation of the Moy?—I have already reported upon the navigation of the Moy river from Lough Conn by Foxford, to the sea at Ballina. In proceeding inland by the Moy river towards the bridge of Ballylahan from Lough Cullin, a distance of about three miles, there is a rise of only seven feet; and from the bridge of Ballylahan to the junction of the Geesaden river with the Moy river, there is a rise of only 14 feet. In less than half a mile above that, along the Moy, there is a rise of 12 feet. I am not aware at present that I am in possession of any levels of the Moy river higher up; there is a rise of 36 feet above the level of the surface water in Lough Conn, in a distance of about five miles and a quarter.

117. Has Ballina been very much increasing within the last few years?—Extremely so; I believe that the population of it has nearly doubled within these 20 years.

118. What do you suppose the population to be now?—I should suppose about 10,000 inhabitants.

119. Do you consider that it is of material importance that the navigation between Ballina and the sea should be completed?—I do think it of the first importance that the Moy should be improved as far as possible for the trading vessels visiting that port.

120. Has not Ballina and Killala Bay very superior advantages for commercial intercourse with Liverpool and Glasgow?—Yes, considerable facilities, and at present a very extensive trade is carried on both with Liverpool and Glasgow.

121. Have you read Mr. Alexander Clendenning's evidence before the Committee of Agriculture of 1833, in which he states that it costs 10*s.* a ton conveying corn 20 miles, from the inland country to the seaport?—Yes.

122. Do you not consider that that expense would be materially lessened by water carriage?—By water carriage I should think that it ought to be carried for less than 1*d.* a ton per mile.

123. That would be 20*d.* instead of 10*s.*?—Precisely so.

124. Suppose this navigable communication between Lough Conn and the sea was effected, which way would you think it most desirable to connect Castlebar with the sea, through Lough Conn or through Lough Castlebar?—I should think that as Westport Harbour is deeply embayed, and the west and south-westerly gales prevail upon that coast, and as a ship has to beat against the wind not less than 30 miles seaward to get round Achil Head, if she proceeds either to the port of Glasgow in the Clyde, or to Liverpool by the north channel; or if she proceeds southward, by Slime Head, to reach the southern channel for either Bristol or London: I should think, under these circumstances, that I would prefer sending corn down by the natural navigation of the Turlough River and Lough Conn to the port of Ballina, because there is facility for a ship to sail from Killala Bay, both from the position and also the prevailing winds on that coast, to reach the Clyde or Liverpool easier than round Achil Head.

125. Would you conceive there is greater facility for sending grain from Castlebar to the sea at Westport, or to the sea at Ballina?—Decidedly to Westport, because the distance is much shorter.

126. How do you suppose the proceeds of the country would be exported, in the event of these three lines being made navigable?—The greatest export will be naturally by Lough Carra, Lough Mask and Lough Corrib, to Galway; the second will be by the river of Turlough to Lough Conn and Ballina; the third, by Castlebar, through the lakes of Castlebar, to Westport at the sea. The trade of the country will divide itself into three branches; the greatest to Galway, the second to Ballina, and the third to Westport.

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Lunæ, 29° die Junii, 1835.

RIGHT HON. DOMINICK BROWNE, IN THE CHAIR.

William Bald, Esq., called in; and further Examined.

William Bald, Esq. 29 June 1835.

127. HAVE you any additional statement to make to the Committee?—There are very extensive quarries of very fine, beautiful black marble situated at the edges of Lough Corrib, near Galway; at Cong, close to the proposed navigation, are quarries of grey limestone, perhaps the best in Ireland; single blocks can be procured there to any size, even 40 feet long and three feet square, perfectly sound; indeed the large blocks there, when struck with a hammer, ring like a bell, announcing neither fracture nor fissure. At Turlough, in Mayo, close to the line of the proposed canal, are large and splendid beds of black marble, which take a high polish, and extremely well suited to many useful as well as ornamental purposes. On the borders of Lough Cullin and Lough Conn, and all round the Puntoon on both sides of the lakes, and also at Foxford, are immense quantities of dark grey and light coloured granite, containing a small portion of mica; this rock is highly crystalized and extremely hard, capable of taking a high polish. This granite would be invaluable for the construction of light-houses and bridges, &c., and also for monuments destined to commemorate great events, because it is extremely sound, of a most durable nature, and admirably adapted for such purposes. On the sides and along the edges of Lough Conn are to be found quarries of sandstone, most valuable as a building material; and also sandstone flags, an article always in much demand in towns: there are also quarries of secondary limestone on the borders of Lough Conn. In the interior districts are to be found an abundance of brick clay and marl, and there are also large beds of pipe clay. All these valuable productions of the country would be opened up and wrought to a very great extent, whereby a numerous body of labouring men would be most usefully and beneficially employed, not only to themselves but also to the whole country; and there can be no doubt but various branches of new trade and traffic would be created, in working out and procuring these valuable materials, if the lake and river navigation were but once opened; indeed all those productions are at present locked in and entombed for the want of a cheap mode of conveyance to the respective markets on the coast, and also to the interior towns. If this lake and river navigation were opened, a valuable remunerating trade would spring up, in addition to the very extensive one which would immediately take place in the transport of all the agricultural produce from the interior to the seaports situated on the coast.

It would be most desirable to connect either Lough Mask or Lough Corrib with the Killery Harbour, if practicable, either by water or a railway, because it would open and connect the lake and river navigation with the valuable slate quarries which are situated at the head and along the sides of this harbour. The slates of the Killeries are of as good a quality as any to be found in Ireland; and these valuable and useful quarries are at present lying unwrought, in the middle of an unemployed population, because there is not at present any communication between them and the interior towns of Ireland, to send out the produce to market.

I have in my evidence already given to the Committee on Public Works for Ireland the fact of the Lady Dunally steam-boat, on the Shannon, going 30 miles per day, consuming 30 boxes of turf fuel, at 4*d.* per box, which is at the rate of 4*d.* per mile for propelling the vessel. The Steam Company of the Shannon River deserve the highest praise for this application of turf fuel, the production of the country, in preference to that of coal, in working the steam engine; and although the application of turf fuel in working a steam engine be not in this case new, yet it is very important to Ireland to see it practically applied to so useful a purpose; because, it is to be hoped, that all the engines on board of the steam-boats

William Bald, Esq. 29 June 1835.

navigating the lakes and rivers of Ireland will be worked by turf fuel alone, and which will give useful employment to the labouring population, and be the means of draining and improving the extensive bogs which lie adjacent to those lake and river navigations.

A small steamer might draw along the lakes of Carra, Mask and Corrib, four boats, each carrying 50 tons, to a distance of 40 miles per day; the cost of fuel might be about 13*s.*, which would be less than 1*d.* a ton for 40 miles; and if the wind was favourable, this expense might even be entirely saved by wind power.

128. Would it not be advantageous to have on the map annexed to this Report a sketch of the proposed line of the Grand Canal from Ballinasloe to Galway, and towards Tuam?—Yes, it would; and I will insert the same on the map.

Veneris, 3° *die Julii*, 1835.

RIGHT HON. DOMINICK BROWNE, IN THE CHAIR.

William Bald, Esq., called in; and further Examined.

William Bald, Esq. 3 July 1835.

129. HAVE you formed any estimate of the expense of making the surveys, plans and estimates for those branches of navigable communication to which the Committee has directed its attention, omitting those parts which will necessarily be included in the Ordnance survey of Ireland?—Yes, I have, as follows:

	£.	*s.*	*d.*
1. Plans and sections of the ground between Lough Corrib and Lough Mask, with estimates in detail of the works to be constructed, two miles and a half - - - - - -	75	–	–
2. Plans and sections for deepening, widening and improving the navigation of the Ayle River, from Lough Mask to Coolodge Lake, seven miles and a half, with estimates in detail -	195	–	
3. Plans and sections of proposed canal across from Coolodge, Lough Lake to Castlebar Lake, three miles, with estimates in detail - - - - - - - - - -	75	–	–
4. Plans and sections of canal navigation from Castlebar Lakes to the sea: this will require at least seven miles to be examined and measured; with detailed estimates - - -	210	–	–
5. Plans and sections of canal navigation from Castlebar to Turlough, and along the Turlough River to Lough Cullin, distance about nine miles and a half, with detailed estimates -	247	–	–
6. Plans and estimates of proposed canal from Lough Conn to the sea at Ballina, three miles and a half - - - - -	105	–	–
7. Plans and sections of the Moy River from Lough Cullin to Foxford, and from Foxford to the sea at Ballina, with plans and detailed estimates, fourteen miles - - - - -	364	–	–
For 52 miles - - - £.	1,271	–	–

But the lakes and rivers are to be surveyed by the Ordnance officers, and the sounding of the lakes are to be done by the Admiralty, whose officers have finished the sounding of Lough Neagh.

A MAP OF
LAKES CORRIB, MASK, CARRA, CASTLEBAR or RAHINS, CULLIN & CONN,
showing the
PROPOSED NAVIGABLE COMMUNICATIONS BETWEEN THEM AND THE SEA
AT
GALWAY, WESTPORT, AND BALLINA,
and the
NAVIGATIONS CONNECTED WITH THOSE LAKES,
by
WILLIAM BALD, CIVIL ENGINEER, F.R.S.E., M.R.I.A. &c;
1835.

KILALLA BAY
KILALLA
Ballina
Crossmolina
LOUGH CONN
Foxford
Granite
Errif R.
Lough Conn
Lough Cullin
Ox Mts
Lough Arrow
Lough Gara
Tobercurry
Boyle
Gara L.
CARRICK
Jamestown
R. Shannon
Ballaghy
Swineford
Ballaghaderreen
Elphin
Killkelly
Tulsk
Castlereagh
Ballyshannon
Clare
Balcarra
Castlebar
NEWPORT
NEWPORT BAY
WESTPORT
WESTPORT B.
Cloon Lough
LOUGH
SLIGO
MAYO
ROSCOMMON
GALWAY

Ballinrobe
LOUGH MASK
50
Inverted Canals
Cong
Shrael
TUAM
Tarbeg
Headford
Monivea
Kilconnel
Aughrim
Ballinasloe
Ballinamore
Ballyforan
Blakeney
New Town Bellew
Canals proposed by Mr Calburne
ATHLONE
ROSCOMMON
River Shannon
WESTMEATH
Shannon Br.
Suck R.
Grand Canal
Broadford River
Grand Canal
Cloghen
Shannon Harbour
Laurencetown
Eyrecourt
Banagher
Athenry
Clare Galway
Line of Canal proposed by Mr Calburne
Marble Quarries
Oranmore
LOUGHREA
Lough
Ballydoogan
Proposed Canal by Mr Calburne
Portumina
River Shannon
LOUGH DERG
Woodford
Derrydonnel
Marble Quarries
State Quarries
Killery Harbour
Leenaun
Maame Roads
Tonaxill
Oughterard
Shindilla
Screeb
Cannes B.
Kilkeeran Bay
Castello B.
Spiddle
GALWAY
Barna
GALWAY BAY
Kinvara
Gort
English Miles
1 2 3 4 5 10 15
The Figures expressing the Heights of the Lakes above the Sea, thus..... 50
Canals .....
Present Lake and River Navigations.....
Secondary Proposed Navigations.....
1 0

Day & Haghe Lith.rs to the King.

334. Ordered by the House of Commons to be Printed 3rd July 1835.

W.m Tooke & Eyre & Spottiswoode Printers

REPORT

FROM THE

SELECT COMMITTEE

ON

CONNAUGHT LAKES;

WITH THE

MINUTES OF EVIDENCE.

Ordered, by The House of Commons, *to be Printed,*
3 *July* 1835.

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FIRST REPORT

FROM THE

SELECT COMMITTEE

APPOINTED

TO INQUIRE INTO THE AMOUNT OF ADVANCES

MADE BY THE

COMMISSIONERS

OF

PUBLIC WORKS IN IRELAND.

Ordered, by The House of Commons, *to be Printed,*
26 *June* 1835.

Martis, 17° *die Martii*, 1835.

Ordered, That a Select Committee be appointed to inquire into the Amount of Advances made by the Commissioners of Public Works in Ireland, the Regulations under which they were made, the Purposes to which they have been applied, and the Amount of Repayments; to consider also the various Reports made by Committees and Commissioners on the subject of reclaiming Waste Lands in Ireland, and to what extent the suggestions which they contain have been complied with.

And a Committee is appointed, of—

Mr. Lynch.
Mr. Chancellor of the Exchequer.
Sir Henry Hardinge.
Mr. Spring Rice.
Sir Henry Parnell.
Sir Thomas Fremantle.
Mr. O'Connell.
Sir Richard Musgrave.
Mr. Wyse.
Mr. Morgan J. O'Connell.
Colonel Conolly.
Colonel Perceval.
Mr. Feargus O'Connor.
Mr. William Smith O'Brien.
Mr. James Loch.
Mr. Poulett Scrope.
O'Conor Don.
Mr. Anthony Lefroy.
Mr. James Grattan.
Mr. Robert Clive.
Lord Viscount Clements.
Sir Charles Coote.
Mr. Lowther Chapman.
Colonel Bruen.
Mr. Thomas Gladstone.
Earl of Kerry.
Sir Robert Bateson.
Mr. Bodkin.
Mr. Blake.
Mr. Christopher Fitzsimon.
Lord Viscount Castlereagh.
Mr. William Roche.
Mr. Sheil.

Ordered, That the said Committee have power to send for Persons, Papers and Records.

Ordered, That Five be the Quorum of the Committee.

Jovis, 19° *die Martii*, 1835.

Ordered, That Mr. Mullins be added to the Committee.

Veneris, 27° *die Martii*, 1835.

Ordered, That Sir Charles Lemon, Mr. Nicholl, Mr. Robert Palmer, Mr. Cumming Bruce, Mr. Jephson, Mr. Cornelius O'Brien and Mr. French, be added to the Committee.

Lunæ, 13° *die Aprilis*, 1835.

Ordered, That Mr. Feargus O'Connor and Colonel Perceval be discharged from further attendance on the Committee.

Ordered, That Sir William Brabazon and Mr. Dominick Browne be added to the Committee.

Martis, 19° *die Maii*, 1835.

Ordered, That Lord Viscount Morpeth, Lord Viscount Acheson, Major Macnamara, Mr. Edward Ruthven, Mr. Thomas Martin, Mr. Benjamin Smith and Mr. Bellew, be added to the Committee.

Jovis, 4° *die Junii*, 1835.

Ordered, That Mr. Barron and Mr. David Roche be added to the Committee.

Veneris, 26° *die Junii*, 1835.

Ordered, That the Committee have power to report from time to time, together with the Minutes of Evidence taken before them.

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FIRST REPORT.

THE SELECT COMMITTEE appointed to inquire into the AMOUNT of ADVANCES made by the COMMISSIONERS of PUBLIC WORKS in *Ireland*, the Regulations under which they were made, the Purposes to which they have been applied, and the AMOUNT of REPAYMENTS; to consider also the various Reports made by Committees and Commissioners on the subject of reclaiming WASTE LANDS in *Ireland*, and to what extent the suggestions which they contain have been complied with;—and to Report from time to time to The House, together with the MINUTES of the EVIDENCE taken before them:——HAVE proceeded in the inquiries directed to be made, and have agreed to the following, being their FIRST REPORT:

THE Advantages derivable to Ireland and the United Kingdom from Public Works, having been heretofore frequently investigated for the information of The House and His Majesty's Government, Your Committee have been materially aided by the results of those investigations, and have limited their inquiries through individual Witnesses, as much as possible, to such persons acquainted with Irish affairs as they have found in London for other purposes, thereby restricting the expenses attendant on summoning witnesses from Ireland. They have also been considerably assisted by the annual Reports made by the Commissioners of the Board of Public Works in Ireland.

CONSTITUTION AND DUTIES OF THE BOARD.

The Irish Board of Public Works was constituted in 1831, by the Act 1 & 2 Will. IV. c. 33, and has been charged by the provisions thereof with the execution of the following objects:

1st. The management of a Fund of £.500,000, placed at its disposal, under the sanction of His Majesty's Treasury, for Loans in aid of Public Works, and individual outlay, for the purposes mentioned in the Act.

2d. The management of a Fund of £.50,000, for Grants in aid of the formation of Roads and Bridges, and small Piers and Harbours along the sea-coast.

3d. Inland Navigation.

4th. The Fisheries of Ireland, formerly under the superintendence of the late Directors General of Inland Navigation.

5th. Certain Roads and Bridges under the Act of the 6th Geo. IV. c. 101.

The Board consists of a Chairman and two Commissioners: the former and one of the latter have been military engineers, and the other a member of the late Board for auditing Army Accounts in Ireland; assisted by a Secretary, an Accountant, an Engineer, and a very moderate establishment of Clerks. This Board superseded five Boards, which had existed in Ireland previously to 1831,—the Board of Works for Dublin, the Board of Inland Navigation, a Board for lending Money from the Consolidated Fund, the Commissioners of Kingstown Harbour, and the Commissioners of Dunmore Harbour; and one of these Boards, that for Inland Navigation, had previously transferred to it the duties of a Board for promoting the Irish Fisheries. The whole annual expense of these Boards was nearly £.10,000. The actual annual expense of the establishment of the present Board of Public Works is £.5,500.

The following additional duties to those specified in the Act, have been committed to the present Board by his Excellency the Lord Lieutenant of Ireland, or by particular Acts:—

The charge of the Public Buildings in Dublin and the Phœnix Park.
Dunmore Harbour.
Kingstown Harbour.
Lunatic Asylums.
With many others of extensive but more temporary nature.

The charge of the Board's establishment, viz. £.5,500 per annum is defrayed out of the profit obtained by interest payable on Loans beyond the cost to Government.

LOANS.

When a loan is sanctioned by the Board of Works and the Lords of the Treasury in pursuance of the Act, advances are made on account of it; Exchequer Bills to the amount being handed to the party, who receives the premium, if any, arising on them.

The Board is authorized to lend money, with the sanction of the Treasury, to

Grand Juries,
Public Bodies,
Companies,
And Individuals;

For any of the following purposes:

Roads and Bridges,
Harbours,
Piers,
Docks,
Canals and Railways,
Mines and Quarries,
Drainage and Improvement of Estates,
Buildings, or other description of Public Works.

And by an Act of 1834, it was directed that the Board should advance £.100,000 to the Commissioners appointed under the Act of 1833, for managing Church Temporalities in Ireland.

The Act requires the loans made to Grand Juries to be on the security of presentments for levying the amount by half-yearly instalments of not less than £.10 per cent. per annum, of the sums lent, with an annual interest not exceeding £.5 per cent.

And

And loans for public works are to be made on the security of "the rates, rents, tolls, profits and receipts," repayable in twenty-five years by instalments, commencing immediately or (if the Board of Works and Lords of the Treasury shall so determine) in five years after the date of the first advance made on account of each loan, with interest at a rate not less than £.4 per cent. per annum, on the balance remaining due, payable annually. It is required in all these cases, except as to public bodies acting under the authority of an Act of Parliament, and where no dividend or profit is payable thereout to any person or persons, that "the rates, rents, tolls, profits and receipts" on the security of which a loan shall be made, shall be in amount at least double the interest required by the Board on the sum proposed to be advanced, or where no Tolls are in existence, that a sum not less than one-third part of the estimated costs should be expended, subscribed, or be secured or deposited to the satisfaction of the Commissioners.

And loans to *individuals* for drainage or other improvement of estates (which are limited to cases where it shall be proved to the Board that the works, when completed, will increase the value of the land at least £.10 per cent. on the sum proposed to be expended) are required to be repaid within three years after the expiration of the period to be fixed by the Board of Works for the completion of the improvement, with interest, payable half-yearly, of not less than £.5 per cent. per annum. It is necessary that a contract, in all cases of borrowing for such improvements, with two sureties, shall be entered into for the full and complete execution of the work within a period to be fixed by the Board not exceeding seven years.

With respect to all loans, the securities to the Board are to have priority over existing securities, if four-fifths in value of the incumbrancers agree, but not otherwise.

Securities are authorized to be taken in deposits or transfers of Bank or Government Stock, Exchequer Bills or India Bonds, in lieu of the other securities specified in the Act, or as collateral thereto.

And they are authorized to take personal security as a collateral security, and also to make loans, not exceeding £.1,000 for one work, on personal security alone, provided the parties shall have previously expended, subscribed, secured or deposited, a sum equal to one-half of the estimated cost of the proposed work; such loans to be repayable within five years from the advance thereof, with interest of not less than £.5 per cent. per annum, payable half-yearly. The total of loans on personal security only cannot exceed £.50,000 at any one time.

By the 18th section of the Act, it is provided, that all persons, public bodies or companies (except Grand Juries) borrowing money under the Act, or becoming security for others, shall, besides the securities in each case respectively directed to be taken, become bound to His Majesty, by writing, obligatory in such penal sum as shall be directed by the Commissioners; and by the 48th section, power is given to the Company to sue Proprietors or Shareholders of unfinished works for money to complete the same, in case the expense exceeds the estimate.

The amount of loans approved by the Board of Works, some of which are not definitively sanctioned, is £.497,170. 18*s*. The amount of the loans sanctioned is £.351,770. 18*s*. The amount of advances made on account of such loans (being in Exchequer Bills) is £.195,250.

And there is as yet to be lent, supposing all the loans approved of shall be sanctioned, and of which there is little doubt, only £.2,829. 2*s*. This residue is the sole amount for which the Board of Works can at present entertain applications.

All the loans already approved or sanctioned, except the loan of the £.100,000, have been agreed to on the terms and regulations specified in the Act. The loans to Grand Juries have been made, in many cases, subject only to interest at £.4 per cent. per annum, under the discretionary power vested by the Act in the Lords of the Treasury and the Board; and the loan of £.100,000 to the Commissioners of Church Temporalities has been made according to the terms of the Act of 1834; a loan entirely foreign to the purposes of the Act, and to the repayment of which, within a short poriod, Your Committee look with anxious solicitude.

The following statement of the objects for which loans have been obtained has been laid before the Committee by the Chairman of the Board:—

OBJECTS.	AMOUNTS.		
	£.	*s*.	*d*.
Roads	79,698	4	10
Bridges	49,412	13	2
Navigations	29,160	–	–
Harbours and Quays	111,950	–	–
Railways	80,000	–	–
Quarries and Culm-pit	9,500	–	–
Mines (Machinery)	2,000	–	–
Drainage	2,200	–	–
Court House	5,000	–	–
Hospital	2,500	–	–
Chapels (completing)	750	–	–
Dublin Wide-Streets	25,000	–	–
Ecclesiastical Commissioners	100,000	–	–
£.	497,170	18	–

Of these loans the sum of £.10,850 has been appropriated to individuals at the rate of £.5 per cent. per annum; and of that sum £.350 has been appropriated on personal security only.

The *Interest* on all the loans has in general been regularly paid; and it has been stated in evidence before the Committee, by Colonel Burgoyne, the Chairman of the Board, that the securities taken for the *Principal*, conformably to the terms of the Act, are such as to give hopes, as far as can be at present foreseen, of the repayment of the whole sum appropriated.

There has been already received, on account of the Principal, the sum of £.20,796. 19. 10., being, with two very trifling exceptions, all that has fallen due according to the terms of the loans.

GRANTS.

In addition to the power of lending Exchequer Bills to the amount of £.500,000, the Board of Works and Lords of the Treasury are empowered by the Act to make grants in aid of the construction of roads and bridges, and of small harbours, piers and quays, on the sea-coast, to the amount of £.50,000 out of the Consolidated Fund.

The

The Act requires the parties (excepting Grand Juries) who shall obtain such grants, to enter into the securities which shall be agreed upon, and pay a moiety of the estimated expense of the works, either in instalments or to the amount of the moiety, as the Board and Lords of the Treasury shall direct; and corporations, tenants in tail, and other persons having only particular or life interests, may mortgage their lands for raising such moiety, with priority over all charges and incumbrances.

The Board is also authorized to receive applications from Grand Juries for grants for Roads and Bridges; and the Grand Juries are authorized to raise their moiety of the contributions.

But no power is given to Grand Juries, or to individuals having only particular or life interests in lands, to raise or charge the moiety of contributions for small harbours, piers and quays.

In all cases of grants for small harbours, piers and quays, they must be situate on the sea-coast. And in all cases it is required that security shall be given that the person or persons making application shall defray such further sum beyond the estimated expense as shall be necessary to complete the road, bridge, quay or pier, according to the specification; and Grand Juries are required to defray the whole of such increased expenditure.

Of the whole amount of grants authorized, the sum of £. 32,708. 6. 2. has been appropriated to the following objects:

Grants for Roads - - - -	£.	30,067	12 2
„ Bridge - - - -		2,222	14 –
„ Piers and Quay - - -		418	– –
	£.	32,708	6 2

By an Act passed in the last Session of Parliament, the Commissioners are directed to expend the sum of £. 7,000 and upwards in the rebuilding of Portumna Bridge, on the Shannon, leaving at the disposal of the Board the sum of £. 10,000, or thereabouts only.

Among the remedial measures proposed for the improvement of Ireland, none can create less difference of opinion, or has been more universally urged by all parties and persons who have considered the subject, than the propriety of encouraging the execution of Public Works; and Your Committee fully coincide in the opinion, that there is every reason in justice and policy for extending in that country the public aid for such purpose, in a degree that does not admit of comparison with the considerations that would be the guide for other parts of the United Kingdom.

In advocating, however, on principle, a liberal support to such objects, Your Committee are fully aware of the necessity for a due consideration of the available means and resources of the Empire, which must restrict any positive national outlay within moderate bounds.

Your Committee are of opinion, however, that by legislative regulation, aid and encouragement, much good may be effected with a trifling gratuitous expense; by lending largely the support of the Government to the forwarding of Loans for works of ascertained public utility and on good security, and by making grants to a moderate extent for the prosecution of other objects of improvement of national importance beyond the means of individuals or of local communities, and in which they have no very immediate interest.

The Act of 1 & 2 William IV. cap. 33. was drawn up with these views, and Your Committee are happy to testify to the ability with which it was devised, as an improvement on every preceding system.

By concentrating the operations of various Boards, all more or less connected with Public Works, it gave the opportunity of regulating them with more economy and effect.

Establishments were much reduced, while greater and more efficient means became generally available.

The experiment has so far succeeded, and the funds are nearly exhausted. Your Committee strongly recommend an extension of the measure, with such modifications as experience has pointed out to be desirable.

In the course of the Inquiry made by Your Committee into the proceedings of the Board of Works, in applying the money placed at its disposal for loans and grants, various statements have been made, of the great advantages arising from these aids, as well as of advantages obstructed by the strictness of the terms by which the Act limits the Board and the Treasury in making loans and grants; and many suggestions of means for extending those advantages and removing those obstructions, with plans for the improvement of Ireland, by extending the powers and control of the Board of Works, have also been made to Your Committee, some of which Your Committee shall now proceed to place before The House, in the order of the respective objects of the Board's constitution to which they refer. In so doing, Your Committee do not conceive they are transgressing the limits and objects of the inquiry directed by The House.

AS TO THE EXPENSES OF THE BOARD.

It appears by the evidence of Colonel Burgoyne (652.), that the expenses of the establishment of the Board of Public Works in Ireland are defrayed by the profits on the loans; and as these expenses amount at present to upwards of £. 5,000 a year (654.), and may become greater, and as more than one-half of the duties performed by the Board are not within the Act (655.), it has been suggested, that, under the circumstances of Ireland which have required the adoption of this system of relief, it would be reasonable to recommend that the expenses of the Board shall not be charged on the loans; and as there is an annual appropriation of £.5,000 out of the Scotch Revenue, by Act of Parliament, for Public Works in Scotland (48 & 82.), which defrays the expenses of management in that country, and leaves a residue of £. 3,000 in aid of the Works (61.), Your Committee agree in the propriety and policy of this suggestion, and recommend it to the consideration of The House.

AS TO THE CONTROLLING POWERS OF THE BOARD.

Colonel Burgoyne has stated to the Committee that it would be important to give the Board of Works, under the direction of the Lords of the Treasury, a control over the County Surveyors employed by the Grand Juries, as they at present act independently (726.), and it would be for the advantage of the country that they should act on a uniform system in the execution of their duties, and under competent direction. He has also suggested that each Grand Jury (739.) should report to the Board of Works on the progress of all Public Works carrying on under its authority, for the purpose of enabling the Board of Works to ascertain the extent of all the operations of that kind going on throughout the country. Your Committee recommend both suggestions to the consideration of The House.

The

The attention of Your Committee has been directed, in the course of their inquiry, to a defect in the working of the Grand Jury system, as to the construction of new lines of roads passing through distinct counties. By an Act of Parliament passed in 1805, the Postmaster-General is empowered to have surveys made of mail roads that shall be considered desirable, which he then recommends to the Grand Jury; and he has a power, for one year, under an Act of 1834, of causing repairs to be made on mail roads, through the Board of Public Works. With reference to these powers, and the defect above referred to, it is deemed important to direct the attention of The House to the following statements in the Evidence.

451. " Col. *Burgoyne*.—I think some occasional compulsory power on the Grand Jury would be very desirable for forwarding public improvements in roads. I know of cases where very useful lines of road would be carried through a country, but for want of the power to pass through some very small portion of an individual county, which fancies its interests opposed to it, the whole measure has been defeated. There are cases where a shilling presentment has been refused in order to defeat the measure, and perhaps a very useful measure for the country. In such instances it would seem very desirable to have some powers to correct the evil. I have known instances of two counties presenting for a bridge, and if the plans of the two engineers employed had been followed, the two halves of the bridge would have been of different constructions and at different parts of the river."

543. " Can you suggest any scheme by which, when one party proposes to make a part of a general line of communication as far as it passes through that county, that an adjoining county could be compelled to continue such line through its territory?—With regard to roads, the only way it could be done is by a commission appointed by Government; Government officers, and gentlemen of a different part of the country, would perhaps be most satisfactory.

544. " Can you mention any instance within your own knowledge where such a provision as has been now suggested to you would be most desirable?—I can mention an instance where a road has been defeated for want of such a power. The Blessington turnpike trust has power to go to Carlow by a line which would be very advantageous to the country; but to carry it into execution it is necessary to pass through a small portion of the county of Kildare, whose Grand Jury have constantly refused to allow it, though only one shilling presentment was asked for; the consequence is, that a very improved communication from Dublin to Waterford, saving seven miles, is in a great measure defeated. There is another case where the county of Mayo has refused to carry on a great leading line of road, that would be very advantageous to the country in general, and which is already perfected up to the frontiers of that county."

On considering these important statements, Your Committee have no hesitation in suggesting that the Board of Works should be empowered to carry improved lines of roads through distinct counties, under regulations similar to those contained in the Act of 1834, for the erection of bridges connecting distinct counties; and Your Committee submit for the consideration of The House, whether the Act of 1834, for the repair of Mail Roads, might not be advantageously continued.

In cases where the entire charge of constructing the roads is to be borne by Government, it is considered but right that the Board of Works should have the power of undertaking and executing such Works, without reference to the Grand Jury.

In connexion with these suggestions, Your Committee beg further to state, that a useful power may be given to the Board, acting under the direction of the Government, of causing surveys to be made of lines of roads and other Public Works, for the purpose of suggesting improvements to Grand Juries and other public bodies; and in cases of applications

for loans, it is also suggested by Your Committee, that the Board of Works should send a surveyor in the first instance, for the purpose of avoiding the double expense of surveying, firstly, for the parties, and subsequently, for the Board, where a survey is not necessary for determining on the expediency of the Works, and where a deposit shall be made of a sufficient sum to pay for the survey. This recommendation Your Committee believe is to a great extent acted upon.

There is another object of great public importance to which Your Committee desire to recommend that the power of the Board of Works should be extended. By an Act of 1 & 2 Will. IV. c. 57, powers are given to undertakers, Grand Juries and individuals, for the reclamation and protection of lands on the banks of rivers and lakes, by sinking, embanking and removing obstructions; and these powers, though efficient and important, have not been carried into operation, from the want of enterprise, or want of confidence in persons to execute the Works; but were they conferred on the Board of Works, Your Committee are of opinion that the beneficial objects of the law would be speedily and safely accomplished: the interference of the Board to be called into operation by a requisition from the majority in value of the land proprietors interested; the Works to be completed under the direction of the Board; the benefit derived to each estate to be ascertained by a jury, and the charge of the Works to be allocated accordingly, becoming a lien on the land.

AS TO ROADS.

The formation of roads in Ireland, with the aid of Parliamentary grants, commenced in 1822; but in Scotland the formation of such roads was commenced in 1803. At present the Irish Board of Works is engaged in completing the construction of new roads in the districts of Mayo and Galway, but is not provided with funds for carrying them to an extent commensurate with the wants of the Western districts of Ireland, and the importance of such lines of communication to the Public, as they promote the improvement of the local population and enhance the resources of the revenue. The Board is also charged with the superintendence of the repair of Government roads in the counties of Clare, Cork, Galway, Kerry, Leitrim, Limerick, Mayo, Roscommon and Tipperary, extending, in all, to 581 miles (1004.), the expenditure on 334 of which, in 1834, amounted to £.5,255; and the whole charge is levied off the counties.

The Board of Works for Scotland (1 to 6.), constituted in 1803, for constructing roads and bridges in the uncultivated districts of that country, has constructed 874 miles of roads, and more than 1,000 bridges, and is now charged with superintending the repair of the roads thus formed, and of 300 miles of Government roads made in the same districts during the last century; for which repairs £.5,000 a year is paid out of the public revenue, as Your Committee have already observed, in aid of the sums raised by local taxation (50, 52, 81 and 111.) The local system of forming and maintaining roads in Scotland is very amply detailed in the Evidence of Mr. Loch, a Member of Your Committee, and in connexion with the prosecution of Public Works in Ireland, is particularly important.

Mr. Loch thus describes the effects produced in Scotland by the formation of the Government roads commenced in 1803:

203. "When I first became acquainted with the Highlands, the great proportion of the people, in place of being immediate tenants of the landlord, held of the different tacksmen. Since then almost all persons occupying land, and I do not confine my observations to Sutherland alone, though principally to it, have become

become immediate tenants to the landlord. They were extremely irregular in their habits, being poachers on the rivers and smugglers, and since then in Sutherland they have given up both, and have become most industrious workmen in every class of agricultural labour. It was necessary, at the period I mention, to get ploughmen from Elgin, and that side of the Moray Frith, and there was not a person who could build a stone wall, the ordinary mode of inclosing land in that country; but it is so much the reverse at the present moment, that almost every ploughman in the country is a native, and they are now the best builders of stone walls in the North, in consequence of which they are employed in all the adjoining counties. A great improvement has taken place also, arising from the greater extension of the English language. When the children on the coast-side formerly came out of school, though they were taught to read English in the school, they spoke nothing but the Gaelic language; now when they play after school hours on the coast-side, they all speak English. Nothing has tended so much to this as the institution of Gaelic schools, which were founded with the object of preserving that language; but the fact is, the moment persons have acquired the facility of reading Gaelic, they find it of no use, and immediately leave it, and teach themselves English.

204. "You say there were a kind of middle men when you first knew the country; how do you account for their being given up?—It was given up first of all from the feeling on the part of the landlord that it was his duty to have all persons on his estate holding immediately from himself; and from the change in the agriculture of the country, it was necessary that the tenant occupying the land should be freed from having his under tenants on the lands, which were then parcelled in what we call lots.

205. "Had the tacksmen leases?—They had all leases.

206. "How were they got out?—There were tenants at will under the middle men, and paid their rents under circumstances of the most grievous nature.

207. "Was it by an agreement between the tenant and the landlord that the middle men were got rid of?—At the termination of the lease the arrangement was always made to provide some situation for the lotters by the landlord, and then the farm was let to tacksmen, the lotters being otherwise provided for.

208. "You got them removed to other places?—We placed them in other places; sometimes a large farm was cut up, and each person got a portion of arable land to maintain himself, and then they were allowed to possess for 19 years, without paying any rent whatever, portions of land they brought into cultivation, in addition to such portion of arable land."

While on this part of the inquiry, Your Committee beg to call the attention of The House to a valuable Paper received from Mr. Scrope, a Member of the Committee, in which he proposes an allotment system to be resorted to for the protection of the poor occupiers of land along new lines of roads through unimproved tracts in Ireland. (*See* Appendix).

The outlay of the small grants heretofore made for those important Works in Ireland, have been productive of no less useful results than those described by Mr. Loch as having been obtained in Scotland; and Your Committee deem it advisable here to quote for the consideration of The House, the very apposite statements on the necessity and result of such works in Ireland, contained in the Report of the Select Committee of 1830, appointed to inquire into the condition of the Irish Poor, and other Public Reports before Your Committee.

"The fertile plains of Limerick, Cork and Kerry are separated from each other by a deserted country, hitherto nearly an impassable barrier. This large district comprehends upwards of 900 square miles; in many places it is very populous. As might be expected under such circumstances, the people are turbulent, and their houses being inaccessible for want of roads, it is not surprising that during the disturbances of 1821 and 1822 this district was the asylum for Whiteboys, smugglers and robbers, and that stolen cattle were drawn into it, as to a safe and impenetrable retreat. Notwithstanding its present desolate state, this country contains within itself the seeds of future improvement and industry." (Griffith, in 1822.)

Mr. Griffith reports on the *same* district, in 1829, after the execution of certain road works:

"A very considerable improvement has already taken place in the vicinity of the roads, both in the industry of the inhabitants, and the appearance of the country; upwards of 60 new lime-kilns have been built; carts, ploughs, harrows and improved implements have become common; new houses of a better class have been built, new inclosures made, and the country has become perfectly tranquil, and exhibits a scene of industry and exertion at once pleasing and remarkable. A large portion of the money received for labour has been husbanded with care, laid out in building substantial houses, and in the purchase of stock and agricultural implements; and numerous examples might be shown of poor labourers possessing neither money, houses nor land when first employed, who in the past year have been enabled to take farms, build houses, and stock their lands."

In a Report on a part of Kerry, Mr. Nimmo states, in 1824, that—

"A few years ago there was hardly a plough, car or carriage of any kind; butter, the only produce, was carried to Cork on horseback; there was not one decent public-house, and only one house slated and plastered in the village; the nearest post-office 30 miles distant. Since the new road was made, there were built in three years upwards of 20 respectable two-story houses; a shop with cloth, hardware and groceries; a comfortable inn, a post-office, bridewell, new chapel, a quay covered with limestone for manure, a salt-work, two stores for oats, and a considerable traffic in linen and yarn."

Upon this subject the following communication has been made to us by Mr. O'Connell, a Member of the Committee.

"The place referred to by Mr. Nimmo is now called the town of Cahir Caveen. At the first period he alludes to, there was but one or two ploughs in the barony, or certainly only two cars. The quantity of wheat grown was confined to the consumption of a few families amongst the more wealthy classes, not exceeding six; and oats were grown in but a little larger proportion.

"Since 1824, the date of Mr. Nimmo's Report, the houses in Cahir Caveen have increased from 20 to upwards of 250. There are several shops, and many persons engaged in the import and export trade. The inhabitants, in 1831, exceeded 1,100; they are now more than 1,300. There are from 10 to 15 new houses being built. A new and enlarged Bridewell, with a Petty Sessions Court, has been built. A well-supported dispensary, and a large and exceedingly well-regulated fever hospital, has been built outside the town, affording the greatest advantages to the poorer classes. There was no medical person resident in 1824; there is now a large and exceedingly well-supplied apothecary shop, and a skilful resident physician.

"The number of cars has multiplied so much, that the Writer has in a single day met upwards of 1,000 cars employed in various works in that country, in which he *knows* there were but two cars a few years ago.

"A bolting-mill has been erected near Cahir Caveen, at an expense of from £.4,000 to £.5,000; and the quantity of wheat grown in the country has multiplied more than 200-fold, and of oats more than 1,000-fold.

"All these advantages, and they are only beginning to develop themselves, have originated in the making of about 70 miles of new road on a level line."

Of a part of Mayo, Mr. Nimmo remarks, in 1829, on the improvements arising from a new line of road:—

"At Belmullet the advance is quite surprising; the place only commenced four years ago; it now consists of about 70 respectable houses, &c. Five ships were loaded with grain and kelp; iron hoops and coal were imported; spirits, beer and wine, British manufactures and tea and sugar were sold; the produce of the fisheries were admitted to a market, and the population, formerly crowded in the narrow valleys, were fast settling along the new line of road."

A most important result is noticed in the same Report. In the district surrounding Clifden, in the county of Galway, no revenue was paid to the state prior to 1822. In 1826 taxation to the amount of £.2,500 was collected, and in 1828 it had augmented to £.6,080. 7. 3.; marking

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marking a consumption of spirits, tobacco, tea, sugar, &c. &c., and thus proving indisputably the increased wealth and improved habits of the people.

Mr. D'Arcy, in part of his evidence, makes the following statement respecting the same district.

1968. "Are there not in the County of Galway 200,000 acres of that description of land, and in a state almost waste, at this moment?—To the west of Galway there are more than 200,000 acres of land lying in that state.

1969. "How many have you of your own?—Several thousands.

1970. "How many are there in the neighbourhood immediately adjoining your estate?—The entire of the reclaimable district I alluded to is in the neighbourhood and adjoins my estate.

1971. "With reference to almost every part of that tract of land, do the facilities with respect to sea manure and lime exist?—The country is so indented by the sea, that the remotest part is not more than six miles from it; if, therefore, there were roads, the facilities would exist to every part.

1972. "Have not Government made a considerable length of road in that district?—They have commenced several, none of which are as yet completed.

1973. "Have not those roads remained for several years with one part finished and the other utterly impassable?—They have.

1974. "How long have they been left in that state?—They commenced in the year 1822, and are yet unfinished.

1975. "Is there one passable?—Not throughout.

1976. "Has not the improvement in that part of the country been very great?—Yes, the improvement of that country has been very great within the last 10 or 12 years; for instance, where you could scarcely get a stone of oats in 1822, from the quantity of waste land brought into cultivation, there was exported from the town of Clifden, this year, 800 tons to London and Liverpool.

1977. "To what do you attribute the increase of cultivation?—Partly to the building of the town, and partly to the outlay of money on the roads, and the facilities afforded by them even in their imperfect state.

1978. "Were oats grown in that country before?—Very little corn was grown in that country prior to the building of the town, there being no market for it.

1997. "If there was a main line of road made through the district, would the proprietors be able to make roads that would join it so as to be useful?—I think if the main lines were completed, the inhabitants of the barony would make some private roads by getting a loan of money, and paying the interest and principal by small instalments; the principal roads they are unable to make."

2013. "When you first went to reside in that country, how many houses were there in the village of Clifden?—Only one.

2014. "How many are there now?—Upwards of 300.

2015. "How many years ago is it since you went there?—Twenty years ago, in the year 1815.

2016. "Was there any revenue receivable from Clifden or its neighbourhood at that time?—Not a shilling.

2017. "Can you state the amount of revenue received last year?—Upwards of £.7,000.

2018. "Does illicit distillation still prevail in Connemara?—It does not; there is a party of Revenue Police who are very active to prevent it.

2019. "Are they sufficient to put it down?—They are.

2020. "Previous to the formation of roads, was there much illicit distillation at Connemara?—There was a great deal.

2021. "If the country was more open by roads, would it be necessary to keep up so large a police for the purpose of suppressing illicit distillation?—It would not."

In further proof of the advantages accruing to the public Revenue in Ireland, by the opening of roads through the hitherto uncultivated parts of the country, Your Committee refer to a paper in the Appendix, received from Mr. Mahony.

Mr. Williams states, that—

"In consequence of the expenditure of £.160,000 in public works in Connaught in seven years, the *increase of the annual revenue has been equal* to the whole of

that expenditure." "I find also," he adds, "a corresponding increase in the revenue of the Cork district, where Mr. Griffith expended £.60,000 in seven years, and *the increase of Customs and Excise has been* £.50,000 *a year*, attributable mainly to the facilities of communication by which whole districts have been rendered available for productive purposes, and a miserable pauper population converted into a class of consumers."

Again, in another statement:—

"The Customs and Excise of Galway have fully doubled since 1822, and exclusive of the improvement in Mayo and Sligo, the surplus must have gone far to pay off the sums Government have expended since that period in the province."

The Committee of 1830 adds, that—

"The effects produced by these public works appear to have been,—extended cultivation, improved habits of industry, a better administration of justice, the re-establishment of peace and tranquillity in disturbed districts, a domestic colonization of a population in excess in certain districts, a diminution of illicit distillation, and a very considerable increase to the Revenue."

In the Reports of the Commissioners of Public Works in Ireland, 1833, 1834 and 1835, it is stated.—

"The very great benefit which the country has derived from the formation of these roads has been repeatedly represented; nothing however short of witnessing the effects produced can give an adequate impression of their value.

"In traversing a country covered with farms and in a high state of cultivation, showing every sign of a good soil and of amply remunerating produce, it becomes difficult to credit the fact, that 10 or 12 years since the whole was a barren waste, the asylum of a miserable and lawless peasantry, who were calculated to be a burden rather than a benefit to the nation; and that this improvement may entirely be attributed to the expenditure of a few thousand pounds in carrying a good road of communication through the district.

"These and other advantages however are insufficient to lead to the execution of such works without the direct and leading support of Government. Some, no doubt, have been constructed by parties feeling a paramount interest in the undertaking, and possessing adequate resources. Small tracts of land capable of improvement may thus be opened by the proprietors, but few individuals know where or how to begin on an extensive range of country, where the operations and results must necessarily be on a great scale, and where the interests are so multiplied and blended, and the relative anticipated advantages so little within the reach of calculation, that even interested parties cannot be induced to venture on the speculation.

"It might reasonably be expected that the Grand Juries would provide a remedy in such cases; but those are naturally the poorest counties in which these unproductive districts abound, and it is with difficulty they can maintain the communications already established. They have the greatest wants and the smallest means, and the remote wastes attract little of their attention."

On a most beneficial class of works, undertaken by Government aid, namely, the small fishery piers on the coast, it is remarked:—

"These piers appear to have been productive of great advantages to the neighbouring districts, not only as affording encouragement to the fisheries, but also accommodation for the landing and shipment of produce, goods, manure, &c., on which considerations they seem to merit the attention of Government."

"The shelter these small piers afford to fishery vessels, and those employed in the distribution of manure and fuel, together with the facility they offer for the transmission of agricultural produce, has created in their immediate vicinity a striking contrast to the wild uncultivated wastes by which they are in many instances surrounded."

Towards the conclusion of the Second, the Report adds:—

"It is not for this Board to give an opinion on the degree of support which the Legislature should bestow on Public Works of primary utility. We are, however, fully persuaded not only of the great political advantage of such an expenditure of the public money, but that it would be to a considerable extent repaid by

by the indirect returns made to the Revenue arising from an increased general prosperity. In England abundant sources of industry are struggling for vent, requiring only the stimulus of such additional facilities of intercourse to enable them to come into full and immediate operation. They are, therefore, in themselves fair sources of speculation for private capital. In Ireland, on the contrary, they are required to foster and encourage sources of industry which are yet latent; and though the consequences and advantages are not so immediately apparent, nor (except in a few instances) do they afford *direct* profits to induce the expenditure of private capital, they are not the less great objects of national interest."

The following are from the Third Report, 1835 :—

" The benefits which the country has derived from the construction of roads carried by the aid of Government contributions through extensive poor uncultivated districts, which were previously without means of communication, continue to manifest themselves in the most satisfactory manner.

" These roads have been the means of fertilizing the deserts, and of depriving the lawless disturbers of the public peace of their place of refuge, affording them at the same time resources for an active, honest industry, of which we must do them the justice to observe, they have not shown any indisposition to avail themselves."...." We cannot lose the opportunity of repeating the declaration of our firm conviction of the good policy of promoting these eminently useful works by the most liberal and extensive support."

Your Committee, impressed with the important national results detailed in these Reports, and desirous of extending them generally through all the uncultivated tracts of Ireland, present to the consideration of The House the following extracts from the Evidence of Colonel Burgoyne :—

455. " Where would you apply the Government money?—In opening very extensive uncultivated districts; I would provide one main thoroughfare of communication at the expense of Government, and for opening less extensive districts I would give the moiety grants as at present; for those occasions they work very well.

456. " Do you include great tracts of bog in your improvable districts?—Yes, bogs and mountain land.

457. " Would it not be right to compel the landlord to contribute?—I think not in the cases of those very extensive districts I referred to; they have no sufficient interest in it; the great benefit derived from opening those lines of roads would be to the lower classes for many years, and it would be only a distant prospective advantage that the landlord would have in them.

458. " Would not the people themselves be willing to contribute?—The people who would derive the principal benefit have no means of doing so, the poor people.

459. " There is their labour?—You cannot have people's gratuitous labour who have nothing else to live on.

460. " Did you ever hear of one-half of the estimated rate per perch being given to the people who executed the work, in consideration of the local advantage they derived from it?—I have; and in such a case the road might be constructed at a moderate expense, very beneficially to the country.

461. " Is this generally applicable to the state of the country with reference to the people's contribution?—I think in some cases it is made the subject of oppression, by taking advantage of their necessities to get out of them their labour at a low rate."

422. " What are the principal lines of communication which you think it would be most desirable to make with reference to the unfolding the resources of the country?—I cannot specify the particular lines; but the districts generally of Galway, Mayo and Clare, and I believe parts of Donegal; Mayo in particular.

423. " Have you taken into consideration the districts adjoining the counties of Kerry, Limerick and Cork?—All these counties also are very susceptible of improvement in that way."

526. " What are the number of miles of general lines of roads of great and pressing importance which you think desirable to be immediately made, and what would be an approximation to the expense?—I should think at a rough guess, that 200 miles would not be saying too much.

527. " What would be the probable expense?—The probable expense might be 120,000*l.*, about 600*l.* a mile perhaps.

528. " And is this the whole extent of the great lines of communication which you would contemplate making out of the public funds?—It would go beyond it.

529. " How much beyond?—I have not made a correct calculation; it would require some researches with reference to that particular object. I gave too precise an answer when I said 200 miles; there are at least 100 miles in Galway and Mayo alone that might be made with very good effect."

AS TO FUTURE LOANS.

After four years' experience of the working of the Act, Your Committee feel themselves authorized in stating, that although strict in many of its terms, it has been of much and essential service to Ireland. Your Committee, however, beg leave to observe, That the prescribed terms are so severe for individuals, only three or four Loans have been taken; and even in respect of public bodies Loans which might have been safely made and most usefully applied, could not be obtained under the Act, (Colonel Burgoyne.) And it is in evidence before Your Committee, that in consequence of the strictness of the terms on which Loans are required to be made by the present Act (355 to 369, 374, 394, 549 to 560, 573, 587, 826, 909, 988, 1013, 1035, 1051, 1067, 1225.) the benefits which might flow from them under less restrictions, yet with equal safety to the Loan Fund, have not been diffused commensurately with the objects for profitable outlay, to which the fund was originally designed to be applied.

It also appears that the rate of Interest chargeable on the Loans, as stated at the commencement of this Report, is considered high with reference to the cost of the Loans to Government, the nature of the objects for which the Loans are required, and the present general rate of interest on money. (398, 402, 650 to 658, 909, 988, 1001, 1015, 1018, 1059 to 1063, 1066, 1083.)

Your Committee find, from the experience of the Loan system introduced into England under the Commissioners for Loans in 1817, that the best possible effects have been produced. By the Evidence of Mr. Brickwood, it appears that since the year 1817, the sum of £.5,300,000 has been advanced by the English Loan Commissioners on the security of Roads and other Public Works in England, and nearly £.200,000 in Ireland, out of the £.250,000, the sum provided by that Act for Ireland.

Previously to the issuing of Exchequer Bills under the present Act, (which is a revolving fund, the issue of Exchequer Bills being always to be available to the amount of £.500,000) a sum of £.500,000 has been from time to time appropriated (and which was advanced out of the Consolidated Fund) for similar Loans in Ireland, under the authority of various Acts of Parliament.*

eo. 4, c. 112.
eo. 4, c. 35.
eo. 4, c. 101.
8 Geo. 4, c 12.

Of the £.5,300,000 advanced in England, the sum of £.2,000,000 is now and has been outstanding at an average rate of interest of £.4. 2. 6. per cent., whilst Government, after the first year of issue, only pay an interest of 2½ per cent.; so that the gain to Government is nearly £.40,000 a year, and although the Commissioners in England are not in the receipt of the interest on the whole sum outstanding, after allowing for all expenditure,

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* These sums are exclusive of the monies lent by Government to Grand Juries in Ireland, for the building of Gaols, Court-houses and Infirmaries, and which are either actually paid or in the progress of repayment.

diture, there is an annual sum of £.30,000 received by Government, over and above all losses which have occurred.

In proportion to the amount, an annual Surplus must have arisen, and must continue to arise, upon the sum of £.500,000 issued under the present Act.

It is also in evidence, that the operation of the 18th and 48th Sections already referred to, have very much deterred persons from borrowing money under the Act, or becoming sureties for others, or shareholders in useful undertakings; and it appears to Your Committee, that if the security was taken to the Commissioners without making the party entering into the security a Crown debtor, the same if not greater security would be afforded, as persons would be more likely to become sureties. And in reference to the 48th Section, it appears to Your Committee that the precautions taken by the Board as to security would admit of some relaxation in the rigour of this clause.

It is also in evidence (Colonel Burgoyne, 1125 to 1133.), that the present Loan Fund, or power of issuing Exchequer Bills to the amount of £.500,000 to lend for Irish Public Works, is inadequate for the wants of Ireland; and it is recommended that the Fund be increased.

A loan has been made by the Commissioners in England to the Ulster Canal Company, at the rate of 3¼ per cent.

Under the present Act, 25 years are given for the repayment of loans for Public Works; interest at £.4 per cent. is required, and a sinking fund of £.4 per cent.

It appears to Your Committee that in order to lighten the pressure upon the resources of the borrowers at the commencement of their undertakings, the sum required for the repayment of the principal, together with the interest, should be fixed and invariable throughout the entire time for which the money is lent. It is in evidence (*see* Appendix, the Evidence of Mr. Mahony) that a fixed payment of £.6 per cent. continued through a period of 29 years will pay an interest of £.4 per cent. on the sum advanced, and pay off the entire principal. If the interest was reduced, the principal money would of course be sooner repaid by means of this fixed payment.

Your Committee, after mature deliberation on the Evidence obtained under these important heads of their Inquiry, beg leave to recommend to the consideration of The House,—

1. That the Loan Fund be increased by a power of issuing Exchequer Bills for an additional sum, which, together with the £.500,000 already granted, shall be a revolving Fund for annual outlay in Loans.

2. That the Lords of the Treasury shall have power to reduce the rate of Interest payable upon the Loans to any rate not lower than the cost to Government.

3. That in respect of Loans to individuals, except in case of a Loan on personal security only, the repayments be a period of time varying from seven to fifteen years; the first repayment to commence at the furthest, at the expiration of five years from the commencement of the Loan.

4. That in respect of Loans for all Public Works, except Loans to Grand Juries, the repayments be made by half-yearly instalments at the annual rate of £.6 per cent. on the original amount, out of which the interest is to be deducted at the rate agreed upon.

5. That the Shares and Stock of all such Public Companies as shall be approved by the Treasury, may be taken as Securities, as well as Government and Bank Stock, Exchequer Bills and India Bonds.

6. That power be given to the Lords of the Treasury to enlarge the time for repayment on the agreement for the Loan.

7. That the writing obligatory required by the 18th Section of the Act be given at the discretion of the Lords of the Treasury, either to His Majesty as thereby directed, or to the Secretary of the Commissioners, so as to relieve the party from becoming a Crown Debtor.

8. That power be given to the Lords of the Treasury, if they shall think fit, to dispense at the time of the contract for the Loan with the obligation contained in the 48th Section.

Your Committee having received several suggestions, recommending that the loans borrowed from the Board of Works should be first charges on the estates improved, taking priority of all previous incumbrances, inasmuch as by the outlay of the loans the estates would be enhanced in value, they are desirous of calling the attention of The House to the recommendation, without offering one on their own part; but they suggest whether, in the event of its not being considered politic to adopt the recommendation, it would not be just to make the loan a first charge on the particular portion of the estate reclaimed or improved by the outlay of it.

Your Committee also beg leave to call the attention of The House to a provision in the French law, whereby it is directed that previously to the commencement of improvement of waste lands, such waste lands should be valued, and the claim of the mortgagee or incumbrancer on that portion of the estate is limited to the amount of the valuation.

It has also been suggested, and to which suggestion Your Committee beg leave to call the attention of The House, that to relieve borrowers from a portion of the expenses attending on the completion of Securities, the Solicitor of the Board of Works should be empowered to require the Officers of the Irish Courts, and of the Registry Office, to make searches for Incumbrances and Settlements affecting the properties on which Securities shall be offered; and that such Officers shall not require any fee or duty for such searches: the searches in those cases to be retained in the Office of the Board of Works, and used only for official purposes.

It has also been recommended to Your Committee, that the regulations of the Act as to loans might be relaxed in favour of tenants for life, or other persons having particular estates, so as to enable them to charge the outlay on the inheritance, as in cases of grants, (1043, 1054 to 1059.) where they are empowered to charge on the inheritance a moiety of the contribution for roads and bridges. Your Committee recommend that this power be given, but with the sanction of the Court of Chancery to be obtained previously to the making of the contract, by petition in a summary way, and the outlay in no case to exceed three years' annual value of the estate. On the repayment of such loans, the tenant for life, or other person having a particular estate, to have a lien on the inheritance for the amount repaid out of the rents and profits accrued due during the continuance of such life or particular estate. This principle is recognized by the law of Scotland; in England, by the Inclosure Acts; and in Ireland, by the Acts for encouraging the planting of trees.

Your

Your Committee cannot leave this part of their inquiries without strongly expressing their opinion, that the maximum of interest receivable by the Commissioners of Public Works should be £. 4 per cent.

AS TO FUTURE GRANTS.

Your Committee have already stated that the Grant Fund provided by the Act, amounting to £.50,000, to be disposed of in contributions of a moiety of the expense of constructing roads through waste tracts in remote districts, and small fishery piers on distant parts of the coast, has been nearly exhausted, and, as it appears, chiefly by aids to Grand Juries. Only a small part has been obtained by individuals (468.) It has been strongly urged that an additional Grant be applied for similar objects, as well as for useful Public Works of any description (469.); and as Moiety Grants in aid of undertakings by individuals, where no direct tolls or profits would arise; and also for the whole expense of works in remote poor districts, where a moiety of the expense could not be obtained either from individuals or public bodies (1137 to 1149.), and in completing the roads already commenced by Government, but which remain in an unfinished state, and whereby the greater part of the advantages to the public are lost.

Your Committee beg leave also to state, that scarcity and distress most frequently occur in those districts where there is a deficiency of roads and means of communication. Such is the case at the present moment.

Your Committee, in reference to the extension of roads, have already pointed to the extraordinary advantages which have been obtained by an expenditure of public money in the carrying on of works through the remote districts of Ireland.

In Scotland, similar results followed similar operations—(Mr. Loch, 151 and 203.); and in that country, grants were made for roads and bridges, from 1803 to 1821, both inclusive, amounting to £.492,670. 10. 5.

Looking to the amount of outlay in Scotland, and the advantages which have flowed from the former, as well those which have been obtained by a much smaller outlay in Ireland, Your Committee recommend that an additional sum be placed at the disposal of the Irish Board of Works, to be expended on all works of public utility, where no private profit shall arise, and where public bodies or individuals shall contribute one-half of the expense. Your Committee also recommend to the consideration of The House, whether similar powers should not be conferred on tenants for life, trustees and other persons, having only particular estates, in reference to the construction of small piers, quays and harbours, as by the present Act are given in respect of roads and bridges, for enabling them to raise their moiety of contribution; and also whether the stipulation required, as to the future maintenance and repair of such small piers, quays and harbours, may not safely be dispensed with, particularly if the recommendation of Your Committee, contained in a former part of this Report, as to Tolls, be adopted; and also whether the stipulations as to the person or persons who shall apply for such moiety, entering into security to defray all monies beyond the estimated expense should not be confined to one-half of such increased expenditure. The same remark is applicable as to Grand Juries; and Your Committee beg leave also to suggest, that no compensation should be given for the lands taken for roads or bridges through any wild or remote districts.

AS TO THE EXECUTION OF PUBLIC WORKS.

Your Committee recommend, that all Works for which a Grant shall be made, or for which the *whole* cost shall be lent, be executed under the sole direction of the Board; and that when a Grand Jury shall contribute towards the expense of a work, it should appoint a Committee to communicate with the Board before making a final presentment for the contribution; and the Board should be required to furnish the Grand Jury with a full account of the expenditure, on the completion of the Works.

Your Committee also recommend, that the labourers and workmen employed should be paid weekly, as far as circumstances will allow; and that in the case of contracts, the Board of Works should stipulate with the contractors that the wages of the labourers and workmen should be paid weekly.

SMALL PIERS, QUAYS AND HARBOURS.

The power of the Irish Board of Works for aiding in the construction of small piers, quays and harbours, is confined by the present Act to the sea-coast; and grants for such objects are limited to £. 1,000 for one work. (472 to 475.) It has been recommended to the Committee that it would be very advantageous to the country were this power extended to available localities along navigable rivers and lakes. On this object the Committee beg to refer to the Evidence of Mr. Charles Wye Williams. And for the means of constructing these desirable works, necessary for protecting the fisheries and facilitating and extending inland trade, Your Committee recommend that Grand Juries should have the power (not now possessed by them) of presenting for a moiety of the cost of such works, to be levied off the district in which they would be situated, (476 & 850.) but the levy not to exceed the amount of the utmost grant which the Board of Works is authorized to make in aid of them, viz. £. 1,000. With respect to the question of Tolls (689, 691, 712 to 723, 959 to 965,) proposed by some of the Witnesses to be levied for the maintenance of such works, it appears to Your Committee, that for the purposes of maintenance and protection, small tolls may be usefully imposed on such works; and that the Board of Works should be authorized to lease such tolls. The lessee to be bound also to protect the works; and that no tolls should be levied unless approved by the Board of Works, such tolls being previously fixed and published.

SAFETY HARBOURS.

On the coast of Ireland there are numerous eligible sites for Safety Harbours, where an outlay of no very great amount, comparatively with its advantages, would be sufficient to render those natural asylums secure havens for Commercial Shipping; but where there is no prospect of pecuniary profit to induce an outlay by individuals or companies;—and there, Your Committee beg leave to call the attention of The House to the Evidence on this point, showing that a national outlay for suitable defences at such stations, and for removing dangerous rocks and making navigable certain passes or straits between the main land and contiguous islands, would be of great importance to the Shipping and Insurance interests of Great Britain, while promoting local benefits in Ireland, by affording employment and encouraging the deep-sea fisheries.

INLAND NAVIGATION AND RAIL-ROADS.

Under the present Act, the Board of Works cannot make *Grants* for improving the Navigation of Rivers, but may lend for all Public Works.

It has been suggested, that for the purpose of improving the navigation of Rivers and Lakes, or extending Canals, it would be politic, whenever individuals shall subscribe a *contribution* of *one-fourth* of the estimated charge, or the lands benefited shall be made liable to *one-fourth* of this charge, that Government shall contribute another *fourth*, and that the remaining *half* shall be lent by the Board of Works, to be repayable by half-yearly instalments, at an average rate of 6 per cent. on the loan, in which the accruing interest on the loan is to be included; these repayments to be raised by tolls terminable on the extinction of the debt, or by other approved means. In all such undertakings, the Government would require to be satisfied that the tolls of the navigations would provide for the repayment of the loan, and that the cost would not exceed the estimates; otherwise, of course, the proposed contribution would not be made. Your Committee therefore recommend this suggestion to the consideration of The House; it being obvious that there cannot be an improvident outlay under such limitations, and that Navigations, so formed, must become of great local or even national importance.

Looking, however, to the condition of Ireland, Your Committee foresee that undertakings of the kind must be very limited when individuals (either subscribers or proprietors) must bear *one-fourth* of the cost; and they beg leave to suggest that other measures should be resorted to for improving extensive lines of inland navigation. For this object, they consider that it would be sound policy to make a liberal outlay of public money, as the advantages to be obtained are equal in national importance to any for which the public money is applied, next to the maintenance of the Government. And they recommend that it shall be the duty of the Board of Works, under the sanction of the Treasury in each case, to investigate the expediency and estimate the expense of all such improvements, on the requisition of Grand Juries or Baronial Sessions, and report to Government the probable advantages and cost of the required Works; each Report to be laid before Parliament previously to the time for considering the Estimates of the year.

Whether Your Committee consider the extension of Canals as a means for facilitating internal intercourse, (and to Canals all the previous observations on Roads are strictly applicable,) or as one of the best means of draining and improving bogs and wastes, whether as an abundant source of employment for the poor, not merely in their construction, but to a far greater extent after their completion, or with reference to the vast sums already invested, and in which Government are directly interested to a very considerable extent, they are strongly impressed with its importance as one of the most powerful agents of national improvement.

The introduction of Railways, if practicable, would also be attended by so many obviously important advantages, that the Committee do not hesitate to class them with Canals, as works of primary importance.

One of the principal objects of the Loan system, and of the present Act, was to encourage the application of private capital and enterprise in promoting public works of this class, and Your Committee attach much importance to the operation of private capital and public credit, in promoting works of this class, where the parties who originate the undertaking and by whom it is to be managed, have a direct personal interest in its prosperity, and give the best possible evidence of the sincerity of their views, by contributing a large portion of the cost.

It has been suggested to Your Committee, that in such cases and for such objects, where the parties offer to advance one-third of the actual cost of the undertaking, the Board of Works should be authorized to advance the remaining two-thirds, one-third to be repaid with interest in the usual manner, and the remainder as a grant; in this case the Company to be restricted from dividing a greater amount of profit than 10 per cent. per annum until they paid off the amount of the Grant as well as the Loan.

A modification of this plan has been suggested by Mr. Cubitt, namely, that of the two-thirds proposed to be advanced by the Board of Works, one-half should be secured upon the work, to be repaid by an annual charge of five per cent. for 31 years, which is equivalent to paying three per cent. interest and investing two per cent. as a sinking fund, and that whatever profit shall arise from the work over and above five per cent. per annum during the repayment of the first part of the Loan, shall go to the Company, and that so soon as the first part of the public Loan shall thus be paid off, the *entire surplus*, over and above five per cent. per annum on the private advance, shall then be applied to the repayment of the second part of the public Loan, but without interest; after which the entire profit may be divided by the Company.

This plan appears to deserve attention, inasmuch as it establishes a mutual interest between the lender and the borrower, as the latter can never enjoy the full amount of his profits while the former remains unpaid; and as likely to bring forward a large amount of private capital in furtherance of Public Works of great national utility as well as emolument, and thus confer benefits on Ireland which neither public nor private capital separately employed could ever accomplish.

On the general principle of improving, or opening, inland Navigations, particularly as it applies to the Shannon and its tributary rivers, Your Committee have received much useful information from Colonel Burgoyne, and Mr. C. W. Williams, one of the Directors of the Dublin Steam Packet Company (506; 536 to 542; 854; 941 to 965.), and they consider the suggestions of those gentlemen worthy of the most serious consideration.

WASTE LANDS.

Your Committee reserve for a further Report the recommendations which they propose to found on the evidence they have taken, and are obtaining, in relation to the reclaiming of the Irish Waste Lands; and they will in that Report apply themselves to the consideration of various suggestions before them, as to the best means of improving the condition of Ireland generally, by promoting the employment of the people throughout the country. For the present, they are desirous of calling the immediate attention of The House to the objects included in this Report, as the ordinary wants of the labouring population in the districts principally referred to, are now seriously increased by the scarcity and dearness of Potatoes, on which the peasantry there exclusively subsist; and it is desirable that any proposed measures for enlarging the operations of the Board of Works, in those parts of the country, be speedily adopted.

June 1835.

FIRST REPORT

FROM THE

SELECT COMMITTEE

ON

PUBLIC WORKS, IRELAND.

Ordered, by The House of Commons, *to be Printed,*
26 *June* 1835.

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FIRST AND SECOND

REPORTS

FROM THE

SELECT COMMITTEE

APPOINTED

TO INQUIRE INTO THE AMOUNT OF ADVANCES

MADE BY THE

COMMISSIONERS

OF

PUBLIC WORKS IN IRELAND;

WITH THE

MINUTES OF EVIDENCE,

APPENDIX AND INDEX.

Ordered, by The House of Commons, *to be Printed,*
26 *June and* 27 *August* 1835.

Martis, 17° *die Martii*, 1835.

Ordered, That a Select Committee be appointed to inquire into the Amount of Advances made by the Commissioners of Public Works in Ireland, the Regulations under which they were made, the Purposes to which they have been applied, and the Amount of Repayments; to consider also the various Reports made by Committees and Commissioners on the subject of reclaiming Waste Lands in Ireland, and to what extent the suggestions which they contain have been complied with.

And a Committee is appointed, of—

Mr. Lynch.
Mr. Chancellor of the Exchequer.
Sir Henry Hardinge.
Mr. Spring Rice.
Sir Henry Parnell.
Sir Thomas Fremantle.
Mr. O'Connell.
Sir Richard Musgrave.
Mr. Wyse.
Mr. Morgan J. O'Connell.
Colonel Conolly.
Colonel Perceval.
Mr. Feargus O'Connor.
Mr. William Smith O'Brien.
Mr. James Loch.
Mr. Poulett Scrope.
O'Conor Don.
Mr. Anthony Lefroy.
Mr. James Grattan.
Mr. Robert Clive.
Lord Viscount Clements.
Sir Charles Coote.
Mr. Lowther Chapman.
Colonel Bruen.
Mr. Thomas Gladstone.
Earl of Kerry.
Sir Robert Bateson.
Mr. Bodkin.
Mr. Blake.
Mr. Christopher Fitzsimon.
Lord Viscount Castlereagh.
Mr. William Roche.
Mr. Sheil.

Ordered, That the said Committee have power to send for Persons, Papers and Records.

Ordered, That Five be the Quorum of the Committee.

Jovis, 19° *die Martii*, 1835.

Ordered, That Mr. Mullins be added to the Committee.

Veneris, 27° *die Martii*, 1835.

Ordered, That Sir Charles Lemon, Mr. Nicholl, Mr. Robert Palmer, Mr. Cumming Bruce, Mr. Jephson, Mr. Cornelius O'Brien and Mr. French, be added to the Committee.

Lunæ, 13° *die Aprilis*, 1835.

Ordered, That Mr. Feargus O'Connor and Colonel Perceval be discharged from further attendance on the Committee.

Ordered, That Sir William Brabazon and Mr. Dominick Browne be added to the Committee.

Martis, 19° *die Maii*, 1835.

Ordered, That Lord Viscount Morpeth, Lord Viscount Acheson, Major Macnamara, Mr. Edward Ruthven, Mr. Thomas Martin, Mr. Benjamin Smith and Mr. Bellew, be added to the Committee.

Jovis, 4° *die Junii*, 1835.

Ordered, That Mr. Barron and Mr. David Roche be added to the Committee.

Veneris, 26° *die Junii*, 1835.

Ordered, That the Committee have power to report from time to time, together with the Minutes of Evidence taken before them.

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FIRST REPORT.

THE SELECT COMMITTEE appointed to inquire into the AMOUNT of ADVANCES made by the COMMISSIONERS of PUBLIC WORKS in *Ireland*, the Regulations under which they were made, the Purposes to which they have been applied, and the AMOUNT of REPAYMENTS; to consider also the various Reports made by Committees and Commissioners on the subject of reclaiming WASTE LANDS in *Ireland*, and to what extent the suggestions which they contain have been complied with;—and to Report from time to time to The House, together with the MINUTES of the EVIDENCE taken before them:——HAVE proceeded in the inquiries directed to be made, and have agreed to the following, being their FIRST REPORT:

THE Advantages derivable to Ireland and the United Kingdom from Public Works, having been heretofore frequently investigated for the information of The House and His Majesty's Government, Your Committee have been materially aided by the results of those investigations, and have limited their inquiries through individual Witnesses, as much as possible, to such persons acquainted with Irish affairs as they have found in London for other purposes, thereby restricting the expenses attendant on summoning witnesses from Ireland. They have also been considerably assisted by the annual Reports made by the Commissioners of the Board of Public Works in Ireland.

CONSTITUTION AND DUTIES OF THE BOARD.

The Irish Board of Public Works was constituted in 1831, by the Act 1 & 2 Will. IV. c. 33, and has been charged by the provisions thereof with the execution of the following objects:

1st. The management of a Fund of £.500,000, placed at its disposal, under the sanction of His Majesty's Treasury, for Loans in aid of Public Works, and individual outlay, for the purposes mentioned in the Act.

2d. The management of a Fund of £.50,000, for Grants in aid of the formation of Roads and Bridges, and small Piers and Harbours along the sea-coast.

3d. Inland Navigation.

4th. The Fisheries of Ireland, formerly under the superintendence of the late Directors General of Inland Navigation.

5th. Certain Roads and Bridges under the Act of the 6th Geo. IV. c. 101.

The Board consists of a Chairman and two Commissioners: the former and one of the latter have been military engineers, and the other a member of the late Board for auditing Army Accounts in Ireland; assisted by a Secretary, an Accountant, an Engineer, and a very moderate establishment of Clerks. This Board superseded five Boards, which had existed in Ireland previously to 1831,—the Board of Works for Dublin, the Board of Inland Navigation, a Board for lending Money from the Consolidated Fund, the Commissioners of Kingstown Harbour, and the Commissioners of Dunmore Harbour; and one of these Boards, that for Inland Navigation, had previously transferred to it the duties of a Board for promoting the Irish Fisheries. The whole annual expense of these Boards was nearly £. 10,000. The actual annual expense of the establishment of the present Board of Public Works is £. 5,500.

The following additional duties to those specified in the Act, have been committed to the present Board by his Excellency the Lord Lieutenant of Ireland, or by particular Acts:—

The charge of the Public Buildings in Dublin and the Phœnix Park.
Dunmore Harbour.
Kingstown Harbour.
Lunatic Asylums.
With many others of extensive but more temporary nature.

The charge of the Board's establishment, viz. £. 5,500 per annum is defrayed out of the profit obtained by interest payable on Loans beyond the cost to Government.

LOANS.

When a loan is sanctioned by the Board of Works and the Lords of the Treasury in pursuance of the Act, advances are made on account of it; Exchequer Bills to the amount being handed to the party, who receives the premium, if any, arising on them.

The Board is authorized to lend money, with the sanction of the Treasury, to

Grand Juries,
Public Bodies,
Companies,
And Individuals;

For any of the following purposes:

Roads and Bridges,
Harbours,
Piers,
Docks,
Canals and Railways,
Mines and Quarries,
Drainage and Improvement of Estates,
Buildings, or other description of Public Works.

And by an Act of 1834, it was directed that the Board should advance £. 100,000 to the Commissioners appointed under the Act of 1833, for managing Church Temporalities in Ireland.

The Act requires the loans made to Grand Juries to be on the security of presentments for levying the amount by half-yearly instalments of not less than £. 10 per cent. per annum, of the sums lent, with an annual interest not exceeding £. 5 per cent.

And

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And loans for public works are to be made on the security of "the rates, rents, tolls, profits and receipts," repayable in twenty-five years by instalments, commencing immediately or (if the Board of Works and Lords of the Treasury shall so determine) in five years after the date of the first advance made on account of each loan, with interest at a rate not less than £.4 per cent. per annum, on the balance remaining due, payable annually. It is required in all these cases, except as to public bodies acting under the authority of an Act of Parliament, and where no dividend or profit is payable thereout to any person or persons, that "the rates, rents, tolls, profits and receipts" on the security of which a loan shall be made, shall be in amount at least double the interest required by the Board on the sum proposed to be advanced, or where no Tolls are in existence, that a sum not less than one-third part of the estimated costs should be expended, subscribed, or be secured or deposited to the satisfaction of the Commissioners.

And loans to *individuals* for drainage or other improvement of estates (which are limited to cases where it shall be proved to the Board that the works, when completed, will increase the value of the land at least £.10 per cent. on the sum proposed to be expended) are required to be repaid within three years after the expiration of the period to be fixed by the Board of Works for the completion of the improvement, with interest, payable half-yearly, of not less than £.5 per cent. per annum. It is necessary that a contract, in all cases of borrowing for such improvements, with two sureties, shall be entered into for the full and complete execution of the work within a period to be fixed by the Board not exceeding seven years.

With respect to all loans, the securities to the Board are to have priority over existing securities, if four-fifths in value of the incumbrancers agree, but not otherwise.

Securities are authorized to be taken in deposits or transfers of Bank or Government Stock, Exchequer Bills or India Bonds, in lieu of the other securities specified in the Act, or as collateral thereto.

And they are authorized to take personal security as a collateral security, and also to make loans, not exceeding £.1,000 for one work, on personal security alone, provided the parties shall have previously expended, subscribed, secured or deposited, a sum equal to one-half of the estimated cost of the proposed work; such loans to be repayable within five years from the advance thereof, with interest of not less than £.5 per cent. per annum, payable half-yearly. The total of loans on personal security only cannot exceed £.50,000 at any one time.

By the 18th section of the Act, it is provided, that all persons, public bodies or companies (except Grand Juries) borrowing money under the Act, or becoming security for others, shall, besides the securities in each case respectively directed to be taken, become bound to His Majesty, by writing, obligatory in such penal sum as shall be directed by the Commissioners; and by the 48th section, power is given to the Company to sue Proprietors or Shareholders of unfinished works for money to complete the same, in case the expense exceeds the estimate.

The amount of loans approved by the Board of Works, some of which are not definitively sanctioned, is £.497,170. 18*s*. The amount of the loans sanctioned is £.351,770. 18*s*. The amount of advances made on account of such loans (being in Exchequer Bills) is £.195,250.

And there is as yet to be lent, supposing all the loans approved of shall be sanctioned, and of which there is little doubt, only £.2,829. 2*s*. This residue is the sole amount for which the Board of Works can at present entertain applications.

All the loans already approved or sanctioned, except the loan of the £.100,000, have been agreed to on the terms and regulations specified in the Act. The loans to Grand Juries have been made, in many cases, subject only to interest at £.4 per cent. per annum, under the discretionary power vested by the Act in the Lords of the Treasury and the Board; and the loan of £.100,000 to the Commissioners of Church Temporalities has been made according to the terms of the Act of 1834; a loan entirely foreign to the purposes of the Act, and to the repayment of which, within a short poriod, Your Committee look with anxious solicitude.

The following statement of the objects for which loans have been obtained has been laid before the Committee by the Chairman of the Board:—

OBJECTS.	AMOUNTS.		
	£.	*s*.	*d*.
Roads	79,698	4	10
Bridges	49,412	13	2
Navigations	29,160	–	–
Harbours and Quays	111,950	–	–
Railways	80,000	–	–
Quarries and Culm-pit	9,500	–	–
Mines (Machinery)	2,000	–	–
Drainage	2,200	–	–
Court House	5,000	–	–
Hospital	2,500	–	–
Chapels (completing)	750	–	–
Dublin Wide-Streets	25,000	–	–
Ecclesiastical Commissioners	100,000	–	–
£.	497,170	18	–

Of these loans the sum of £.10,850 has been appropriated to individuals at the rate of £.5 per cent. per annum; and of that sum £.350 has been appropriated on personal security only.

The *Interest* on all the loans has in general been regularly paid; and it has been stated in evidence before the Committee, by Colonel Burgoyne, the Chairman of the Board, that the securities taken for the *Principal*, conformably to the terms of the Act, are such as to give hopes, as far as can be at present foreseen, of the repayment of the whole sum appropriated.

There has been already received, on account of the Principal, the sum of £.20,796. 19. 10., being, with two very trifling exceptions, all that has fallen due according to the terms of the loans.

GRANTS.

In addition to the power of lending Exchequer Bills to the amount of £.500,000, the Board of Works and Lords of the Treasury are empowered by the Act to make grants in aid of the construction of roads and bridges, and of small harbours, piers and quays, on the sea-coast, to the amount of £.50,000 out of the Consolidated Fund.

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The Act requires the parties (excepting Grand Juries) who shall obtain such grants, to enter into the securities which shall be agreed upon, and pay a moiety of the estimated expense of the works, either in instalments or to the amount of the moiety, as the Board and Lords of the Treasury shall direct; and corporations, tenants in tail, and other persons having only particular or life interests, may mortgage their lands for raising such moiety, with priority over all charges and incumbrances.

The Board is also authorized to receive applications from Grand Juries for grants for Roads and Bridges; and the Grand Juries are authorized to raise their moiety of the contributions.

But no power is given to Grand Juries, or to individuals having only particular or life interests in lands, to raise or charge the moiety of contributions for small harbours, piers and quays.

In all cases of grants for small harbours, piers and quays, they must be situate on the sea-coast. And in all cases it is required that security shall be given that the person or persons making application shall defray such further sum beyond the estimated expense as shall be necessary to complete the road, bridge, quay or pier, according to the specification; and Grand Juries are required to defray the whole of such increased expenditure.

Of the whole amount of grants authorized, the sum of £. 32,708. 6. 2. has been appropriated to the following objects:

Grants for Roads - - - -	£. 30,067 12 2
„ Bridge - - - -	2,222 14 –
„ Piers and Quay - - -	418 – –
	£. 32,708 6 2

By an Act passed in the last Session of Parliament, the Commissioners are directed to expend the sum of £. 7,000 and upwards in the rebuilding of Portumna Bridge, on the Shannon, leaving at the disposal of the Board the sum of £. 10,000, or thereabouts only.

Among the remedial measures proposed for the improvement of Ireland, none can create less difference of opinion, or has been more universally urged by all parties and persons who have considered the subject, than the propriety of encouraging the execution of Public Works; and Your Committee fully coincide in the opinion, that there is every reason in justice and policy for extending in that country the public aid for such purpose, in a degree that does not admit of comparison with the considerations that would be the guide for other parts of the United Kingdom.

In advocating, however, on principle, a liberal support to such objects, Your Committee are fully aware of the necessity for a due consideration of the available means and resources of the Empire, which must restrict any positive national outlay within moderate bounds.

Your Committee are of opinion, however, that by legislative regulation, aid and encouragement, much good may be effected with a trifling gratuitous expense; by lending largely the support of the Government to the forwarding of Loans for works of ascertained public utility and on good security, and by making grants to a moderate extent for the prosecution of other objects of improvement of national importance beyond the means of individuals or of local communities, and in which they have no very immediate interest.

The Act of 1 & 2 William IV. cap. 33. was drawn up with these views, and Your Committee are happy to testify to the ability with which it was devised, as an improvement on every preceding system.

By concentrating the operations of various Boards, all more or less connected with Public Works, it gave the opportunity of regulating them with more economy and effect.

Establishments were much reduced, while greater and more efficient means became generally available.

The experiment has so far succeeded, and the funds are nearly exhausted. Your Committee strongly recommend an extension of the measure, with such modifications as experience has pointed out to be desirable.

In the course of the Inquiry made by Your Committee into the proceedings of the Board of Works, in applying the money placed at its disposal for loans and grants, various statements have been made, of the great advantages arising from these aids, as well as of advantages obstructed by the strictness of the terms by which the Act limits the Board and the Treasury in making loans and grants; and many suggestions of means for extending those advantages and removing those obstructions, with plans for the improvement of Ireland, by extending the powers and control of the Board of Works, have also been made to Your Committee, some of which Your Committee shall now proceed to place before The House, in the order of the respective objects of the Board's constitution to which they refer. In so doing, Your Committee do not conceive they are transgressing the limits and objects of the inquiry directed by The House.

AS TO THE EXPENSES OF THE BOARD.

It appears by the evidence of Colonel Burgoyne (652.), that the expenses of the establishment of the Board of Public Works in Ireland are defrayed by the profits on the loans; and as these expenses amount at present to upwards of £. 5,000 a year (654.), and may become greater, and as more than one-half of the duties performed by the Board are not within the Act (655.), it has been suggested, that, under the circumstances of Ireland which have required the adoption of this system of relief, it would be reasonable to recommend that the expenses of the Board shall not be charged on the loans; and as there is an annual appropriation of £.5,000 out of the Scotch Revenue, by Act of Parliament, for Public Works in Scotland (48 & 82.), which defrays the expenses of management in that country, and leaves a residue of £. 3,000 in aid of the Works (61.), Your Committee agree in the propriety and policy of this suggestion, and recommend it to the consideration of The House.

AS TO THE CONTROLLING POWERS OF THE BOARD.

Colonel Burgoyne has stated to the Committee that it would be important to give the Board of Works, under the direction of the Lords of the Treasury, a control over the County Surveyors employed by the Grand Juries, as they at present act independently (726.), and it would be for the advantage of the country that they should act on a uniform system in the execution of their duties, and under competent direction. He has also suggested that each Grand Jury (739.) should report to the Board of Works on the progress of all Public Works carrying on under its authority, for the purpose of enabling the Board of Works to ascertain the extent of all the operations of that kind going on throughout the country. Your Committee recommend both suggestions to the consideration of The House.

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The attention of Your Committee has been directed, in the course of their inquiry, to a defect in the working of the Grand Jury system, as to the construction of new lines of roads passing through distinct counties. By an Act of Parliament passed in 1805, the Postmaster-General is empowered to have surveys made of mail roads that shall be considered desirable, which he then recommends to the Grand Jury; and he has a power, for one year, under an Act of 1834, of causing repairs to be made on mail roads, through the Board of Public Works. With reference to these powers, and the defect above referred to, it is deemed important to direct the attention of The House to the following statements in the Evidence.

451. "Col. *Burgoyne*.—I think some occasional compulsory power on the Grand Jury would be very desirable for forwarding public improvements in roads. I know of cases where very useful lines of road would be carried through a country, but for want of the power to pass through some very small portion of an individual county, which fancies its interests opposed to it, the whole measure has been defeated. There are cases where a shilling presentment has been refused in order to defeat the measure, and perhaps a very useful measure for the country. In such instances it would seem very desirable to have some powers to correct the evil. I have known instances of two counties presenting for a bridge, and if the plans of the two engineers employed had been followed, the two halves of the bridge would have been of different constructions and at different parts of the river."

543. "Can you suggest any scheme by which, when one party proposes to make a part of a general line of communication as far as it passes through that county, that an adjoining county could be compelled to continue such line through its territory?—With regard to roads, the only way it could be done is by a commission appointed by Government; Government officers, and gentlemen of a different part of the country, would perhaps be most satisfactory.

544. "Can you mention any instance within your own knowledge where such a provision as has been now suggested to you would be most desirable?—I can mention an instance where a road has been defeated for want of such a power. The Blessington turnpike trust has power to go to Carlow by a line which would be very advantageous to the country; but to carry it into execution it is necessary to pass through a small portion of the county of Kildare, whose Grand Jury have constantly refused to allow it, though only one shilling presentment was asked for; the consequence is, that a very improved communication from Dublin to Waterford, saving seven miles, is in a great measure defeated. There is another case where the county of Mayo has refused to carry on a great leading line of road, that would be very advantageous to the country in general, and which is already perfected up to the frontiers of that county."

On considering these important statements, Your Committee have no hesitation in suggesting that the Board of Works should be empowered to carry improved lines of roads through distinct counties, under regulations similar to those contained in the Act of 1834, for the erection of bridges connecting distinct counties; and Your Committee submit for the consideration of The House, whether the Act of 1834, for the repair of Mail Roads, might not be advantageously continued.

In cases where the entire charge of constructing the roads is to be borne by Government, it is considered but right that the Board of Works should have the power of undertaking and executing such Works, without reference to the Grand Jury.

In connexion with these suggestions, Your Committee beg further to state, that a useful power may be given to the Board, acting under the direction of the Government, of causing surveys to be made of lines of roads and other Public Works, for the purpose of suggesting improvements to Grand Juries and other public bodies; and in cases of applications

for loans, it is also suggested by Your Committee, that the Board of Works should send a surveyor in the first instance, for the purpose of avoiding the double expense of surveying, firstly, for the parties, and subsequently, for the Board, where a survey is not necessary for determining on the expediency of the Works, and where a deposit shall be made of a sufficient sum to pay for the survey. This recommendation Your Committee believe is to a great extent acted upon.

There is another object of great public importance to which Your Committee desire to recommend that the power of the Board of Works should be extended. By an Act of 1 & 2 Will. IV. c. 57, powers are given to undertakers, Grand Juries and individuals, for the reclamation and protection of lands on the banks of rivers and lakes, by sinking, embanking and removing obstructions; and these powers, though efficient and important, have not been carried into operation, from the want of enterprise, or want of confidence in persons to execute the Works; but were they conferred on the Board of Works, Your Committee are of opinion that the beneficial objects of the law would be speedily and safely accomplished: the interference of the Board to be called into operation by a requisition from the majority in value of the land proprietors interested; the Works to be completed under the direction of the Board; the benefit derived to each estate to be ascertained by a jury, and the charge of the Works to be allocated accordingly, becoming a lien on the land.

AS TO ROADS.

The formation of roads in Ireland, with the aid of Parliamentary grants, commenced in 1822: but in Scotland the formation of such roads was commenced in 1803. At present the Irish Board of Works is engaged in completing the construction of new roads in the districts of Mayo and Galway, but is not provided with funds for carrying them to an extent commensurate with the wants of the Western districts of Ireland, and the importance of such lines of communication to the Public, as they promote the improvement of the local population and enhance the resources of the revenue. The Board is also charged with the superintendence of the repair of Government roads in the counties of Clare, Cork, Galway, Kerry, Leitrim, Limerick, Mayo, Roscommon and Tipperary, extending, in all, to 581 miles (1004.), the expenditure on 334 of which, in 1834, amounted to £.5,255; and the whole charge is levied off the counties.

The Board of Works for Scotland (1 to 6.), constituted in 1803, for constructing roads and bridges in the uncultivated districts of that country, has constructed 874 miles of roads, and more than 1,000 bridges, and is now charged with superintending the repair of the roads thus formed, and of 300 miles of Government roads made in the same districts during the last century; for which repairs £.5,000 a year is paid out of the public revenue, as Your Committee have already observed, in aid of the sums raised by local taxation (50, 52, 81 and 111.) The local system of forming and maintaining roads in Scotland is very amply detailed in the Evidence of Mr. Loch, a Member of Your Committee, and in connexion with the prosecution of Public Works in Ireland, is particularly important.

Mr. Loch thus describes the effects produced in Scotland by the formation of the Government roads commenced in 1803:

203. "When I first became acquainted with the Highlands, the great proportion of the people, in place of being immediate tenants of the landlord, held of the different tacksmen. Since then almost all persons occupying land, and I do not confine my observations to Sutherland alone, though principally to it, have become

become immediate tenants to the landlord. They were extremely irregular in their habits, being poachers on the rivers and smugglers, and since then in Sutherland they have given up both, and have become most industrious workmen in every class of agricultural labour. It was necessary, at the period I mention, to get ploughmen from Elgin, and that side of the Moray Frith, and there was not a person who could build a stone wall, the ordinary mode of inclosing land in that country; but it is so much the reverse at the present moment, that almost every ploughman in the country is a native, and they are now the best builders of stone walls in the North, in consequence of which they are employed in all the adjoining counties. A great improvement has taken place also, arising from the greater extension of the English language. When the children on the coast-side formerly came out of school, though they were taught to read English in the school, they spoke nothing but the Gaelic language; now when they play after school hours on the coast-side, they all speak English. Nothing has tended so much to this as the institution of Gaelic schools, which were founded with the object of preserving that language; but the fact is, the moment persons have acquired the facility of reading Gaelic, they find it of no use, and immediately leave it, and teach themselves English.

204. "You say there were a kind of middle men when you first knew the country; how do you account for their being given up?--It was given up first of all from the feeling on the part of the landlord that it was his duty to have all persons on his estate holding immediately from himself; and from the change in the agriculture of the country, it was necessary that the tenant occupying the land should be freed from having his under tenants on the lands, which were then parcelled in what we call lots.

205. "Had the tacksmen leases?—They had all leases.

206. "How were they got out?—There were tenants at will under the middle men, and paid their rents under circumstances of the most grievous nature.

207. "Was it by an agreement between the tenant and the landlord that the middle men were got rid of?—At the termination of the lease the arrangement was always made to provide some situation for the lotters by the landlord, and then the farm was let to tacksmen, the lotters being otherwise provided for.

208. "You got them removed to other places?—We placed them in other places; sometimes a large farm was cut up, and each person got a portion of arable land to maintain himself, and then they were allowed to possess for 19 years, without paying any rent whatever, portions of land they brought into cultivation, in addition to such portion of arable land."

While on this part of the inquiry, Your Committee beg to call the attention of The House to a valuable Paper received from Mr. Scrope, a Member of the Committee, in which he proposes an allotment system to be resorted to for the protection of the poor occupiers of land along new lines of roads through unimproved tracts in Ireland. (*See* Appendix).

The outlay of the small grants heretofore made for those important Works in Ireland, have been productive of no less useful results than those described by Mr. Loch as having been obtained in Scotland; and Your Committee deem it advisable here to quote for the consideration of The House, the very apposite statements on the necessity and result of such works in Ireland, contained in the Report of the Select Committee of 1830, appointed to inquire into the condition of the Irish Poor, and other Public Reports before Your Committee.

"The fertile plains of Limerick, Cork and Kerry are separated from each other by a deserted country, hitherto nearly an impassable barrier. This large district comprehends upwards of 900 square miles; in many places it is very populous. As might be expected under such circumstances, the people are turbulent, and their houses being inaccessible for want of roads, it is not surprising that during the disturbances of 1821 and 1822 this district was the asylum for Whiteboys, smugglers and robbers, and that stolen cattle were drawn into it, as to a safe and impenetrable retreat. Notwithstanding its present desolate state, this country contains within itself the seeds of future improvement and industry." (Griffith, in 1822.)

Mr. Griffith reports on the *same* district, in 1829, after the execution of certain road works:

"A very considerable improvement has already taken place in the vicinity of the roads, both in the industry of the inhabitants, and the appearance of the country; upwards of 60 new lime-kilns have been built; carts, ploughs, harrows and improved implements have become common; new houses of a better class have been built, new inclosures made, and the country has become perfectly tranquil, and exhibits a scene of industry and exertion at once pleasing and remarkable. A large portion of the money received for labour has been husbanded with care, laid out in building substantial houses, and in the purchase of stock and agricultural implements; and numerous examples might be shown of poor labourers possessing neither money, houses nor land when first employed, who in the past year have been enabled to take farms, build houses, and stock their lands."

In a Report on a part of Kerry, Mr. Nimmo states, in 1824, that—

"A few years ago there was hardly a plough, car or carriage of any kind; butter, the only produce, was carried to Cork on horseback; there was not one decent public-house, and only one house slated and plastered in the village; the nearest post-office 30 miles distant. Since the new road was made, there were built in three years upwards of 20 respectable two-story houses; a shop with cloth, hardware and groceries; a comfortable inn, a post-office, bridewell, new chapel, a quay covered with limestone for manure, a salt-work, two stores for oats, and a considerable traffic in linen and yarn."

Upon this subject the following communication has been made to us by Mr. O'Connell, a Member of the Committee.

"The place referred to by Mr. Nimmo is now called the town of Cahir Caveen. At the first period he alludes to, there was but one or two ploughs in the barony, or certainly only two cars. The quantity of wheat grown was confined to the consumption of a few families amongst the more wealthy classes, not exceeding six; and oats were grown in but a little larger proportion.

"Since 1824, the date of Mr. Nimmo's Report, the houses in Cahir Caveen have increased from 20 to upwards of 250. There are several shops, and many persons engaged in the import and export trade. The inhabitants, in 1831, exceeded 1,100; they are now more than 1,300. There are from 10 to 15 new houses being built. A new and enlarged Bridewell, with a Petty Sessions Court, has been built. A well-supported dispensary, and a large and exceedingly well-regulated fever hospital, has been built outside the town, affording the greatest advantages to the poorer classes. There was no medical person resident in 1824; there is now a large and exceedingly well-supplied apothecary shop, and a skilful resident physician.

"The number of cars has multiplied so much, that the Writer has in a single day met upwards of 1,000 cars employed in various works in that country, in which he *knows* there were but two cars a few years ago.

"A bolting-mill has been erected near Cahir Caveen, at an expense of from £.4,000 to £.5,000; and the quantity of wheat grown in the country has multiplied more than 200-fold, and of oats more than 1,000-fold.

"All these advantages, and they are only beginning to develop themselves, have originated in the making of about 70 miles of new road on a level line."

Of a part of Mayo, Mr. Nimmo remarks, in 1829, on the improvements arising from a new line of road:—

"At Belmullet the advance is quite surprising; the place only commenced four years ago; it now consists of about 70 respectable houses, &c. Five ships were loaded with grain and kelp; iron hoops and coal were imported; spirits, beer and wine, British manufactures and tea and sugar were sold; the produce of the fisheries were admitted to a market, and the population, formerly crowded in the narrow valleys, were fast settling along the new line of road."

A most important result is noticed in the same Report. In the district surrounding Clifden, in the county of Galway, no revenue was paid to the state prior to 1822. In 1826 taxation to the amount of £.2,500 was collected, and in 1828 it had augmented to £.6,080. 7. 3.; marking

marking a consumption of spirits, tobacco, tea, sugar, &c. &c., and thus proving indisputably the increased wealth and improved habits of the people.

Mr. D'Arcy, in part of his evidence, makes the following statement respecting the same district.

1968. "Are there not in the County of Galway 200,000 acres of that description of land, and in a state almost waste, at this moment?—To the west of Galway there are more than 200,000 acres of land lying in that state.

1969. "How many have you of your own?—Several thousands.

1970. "How many are there in the neighbourhood immediately adjoining your estate?—The entire of the reclaimable district I alluded to is in the neighbourhood and adjoins my estate.

1971. "With reference to almost every part of that tract of land, do the facilities with respect to sea manure and lime exist?—The country is so indented by the sea, that the remotest part is not more than six miles from it; if, therefore, there were roads, the facilities would exist to every part.

1972. "Have not Government made a considerable length of road in that district?—They have commenced several, none of which are as yet completed.

1973. "Have not those roads remained for several years with one part finished and the other utterly impassable?—They have.

1974. "How long have they been left in that state?—They commenced in the year 1822, and are yet unfinished.

1975. "Is there one passable?—Not throughout.

1976. "Has not the improvement in that part of the country been very great?—Yes, the improvement of that country has been very great within the last 10 or 12 years; for instance, where you could scarcely get a stone of oats in 1822, from the quantity of waste land brought into cultivation, there was exported from the town of Clifden, this year, 800 tons to London and Liverpool.

1977. "To what do you attribute the increase of cultivation?—Partly to the building of the town, and partly to the outlay of money on the roads, and the facilities afforded by them even in their imperfect state.

1978. "Were oats grown in that country before?—Very little corn was grown in that country prior to the building of the town, there being no market for it.

1997. "If there was a main line of road made through the district, would the proprietors be able to make roads that would join it so as to be useful?—I think if the main lines were completed, the inhabitants of the barony would make some private roads by getting a loan of money, and paying the interest and principal by small instalments; the principal roads they are unable to make."

2013. "When you first went to reside in that country, how many houses were there in the village of Clifden?—Only one.

2014. "How many are there now?—Upwards of 300.

2015. "How many years ago is it since you went there?—Twenty years ago, in the year 1815.

2016. "Was there any revenue receivable from Clifden or its neighbourhood at that time?—Not a shilling.

2017. "Can you state the amount of revenue received last year?—Upwards of £.7,000.

2018. "Does illicit distillation still prevail in Connemara?—It does not; there is a party of Revenue Police who are very active to prevent it.

2019. "Are they sufficient to put it down?—They are.

2020. "Previous to the formation of roads, was there much illicit distillation at Connemara?—There was a great deal.

2021. "If the country was more open by roads, would it be necessary to keep up so large a police for the purpose of suppressing illicit distillation?—It would not."

In further proof of the advantages accruing to the public Revenue in Ireland, by the opening of roads through the hitherto uncultivated parts of the country, Your Committee refer to a paper in the Appendix, received from Mr. Mahony.

Mr. Williams states, that—

"In consequence of the expenditure of £.160,000 in public works in Connaught in seven years, the *increase of the annual revenue has been equal* to the whole of

that expenditure." "I find also," he adds, "a corresponding increase in the revenue of the Cork district, where Mr. Griffith expended £.60,000 in seven years, and *the increase of Customs and Excise has been* £.50,000 *a year*, attributable mainly to the facilities of communication by which whole districts have been rendered available for productive purposes, and a miserable pauper population converted into a class of consumers."

Again, in another statement:—

"The Customs and Excise of Galway have fully doubled since 1822, and exclusive of the improvement in Mayo and Sligo, the surplus must have gone far to pay off the sums Government have expended since that period in the province."

The Committee of 1830 adds, that—

"The effects produced by these public works appear to have been,—extended cultivation, improved habits of industry, a better administration of justice, the re-establishment of peace and tranquillity in disturbed districts, a domestic colonization of a population in excess in certain districts, a diminution of illicit distillation, and a very considerable increase to the Revenue."

In the Reports of the Commissioners of Public Works in Ireland, 1833, 1834 and 1835, it is stated.—

"The very great benefit which the country has derived from the formation of these roads has been repeatedly represented; nothing however short of witnessing the effects produced can give an adequate impression of their value.

"In traversing a country covered with farms and in a high state of cultivation, showing every sign of a good soil and of amply remunerating produce, it becomes difficult to credit the fact, that 10 or 12 years since the whole was a barren waste, the asylum of a miserable and lawless peasantry, who were calculated to be a burden rather than a benefit to the nation; and that this improvement may entirely be attributed to the expenditure of a few thousand pounds in carrying a good road of communication through the district.

"These and other advantages however are insufficient to lead to the execution of such works without the direct and leading support of Government. Some, no doubt, have been constructed by parties feeling a paramount interest in the undertaking, and possessing adequate resources. Small tracts of land capable of improvement may thus be opened by the proprietors, but few individuals know where or how to begin on an extensive range of country, where the operations and results must necessarily be on a great scale, and where the interests are so multiplied and blended, and the relative anticipated advantages so little within the reach of calculation, that even interested parties cannot be induced to venture on the speculation.

"It might reasonably be expected that the Grand Juries would provide a remedy in such cases; but those are naturally the poorest counties in which these unproductive districts abound, and it is with difficulty they can maintain the communications already established. They have the greatest wants and the smallest means, and the remote wastes attract little of their attention."

On a most beneficial class of works, undertaken by Government aid, namely, the small fishery piers on the coast, it is remarked:—

"These piers appear to have been productive of great advantages to the neighbouring districts, not only as affording encouragement to the fisheries, but also accommodation for the landing and shipment of produce, goods, manure, &c., on which considerations they seem to merit the attention of Government."

"The shelter these small piers afford to fishery vessels, and those employed in the distribution of manure and fuel, together with the facility they offer for the transmission of agricultural produce, has created in their immediate vicinity a striking contrast to the wild uncultivated wastes by which they are in many instances surrounded."

Towards the conclusion of the Second, the Report adds:—

"It is not for this Board to give an opinion on the degree of support which the Legislature should bestow on Public Works of primary utility. We are, however, fully persuaded not only of the great political advantage of such an expenditure of the public money, but that it would be to a considerable extent repaid by

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by the indirect returns made to the Revenue arising from an increased general prosperity. In England abundant sources of industry are struggling for vent, requiring only the stimulus of such additional facilities of intercourse to enable them to come into full and immediate operation. They are, therefore, in themselves fair sources of speculation for private capital. In Ireland, on the contrary, they are required to foster and encourage sources of industry which are yet latent; and though the consequences and advantages are not so immediately apparent, nor (except in a few instances) do they afford *direct* profits to induce the expenditure of private capital, they are not the less great objects of national interest."

The following are from the Third Report, 1835 :—

" The benefits which the country has derived from the construction of roads carried by the aid of Government contributions through extensive poor uncultivated districts, which were previously without means of communication, continue to manifest themselves in the most satisfactory manner.

" These roads have been the means of fertilizing the deserts, and of depriving the lawless disturbers of the public peace of their place of refuge, affording them at the same time resources for an active, honest industry, of which we must do them the justice to observe, they have not shown any indisposition to avail themselves."..... " We cannot lose the opportunity of repeating the declaration of our firm conviction of the good policy of promoting these eminently useful works by the most liberal and extensive support."

Your Committee, impressed with the important national results detailed in these Reports, and desirous of extending them generally through all the uncultivated tracts of Ireland, present to the consideration of The House the following extracts from the Evidence of Colonel Burgoyne :—

455. " Where would you apply the Government money?—In opening very extensive uncultivated districts; I would provide one main thoroughfare of communication at the expense of Government, and for opening less extensive districts I would give the moiety grants as at present; for those occasions they work very well.

456. " Do you include great tracts of bog in your improvable districts?—Yes, bogs and mountain land.

457. " Would it not be right to compel the landlord to contribute?—I think not in the cases of those very extensive districts I referred to; they have no sufficient interest in it; the great benefit derived from opening those lines of roads would be to the lower classes for many years, and it would be only a distant prospective advantage that the landlord would have in them.

458. " Would not the people themselves be willing to contribute?—The people who would derive the principal benefit have no means of doing so, the poor people.

459. " There is their labour?—You cannot have people's gratuitous labour who have nothing else to live on.

460. " Did you ever hear of one-half of the estimated rate per perch being given to the people who executed the work, in consideration of the local advantage they derived from it?—I have; and in such a case the road might be constructed at a moderate expense, very beneficially to the country.

461. " Is this generally applicable to the state of the country with reference to the people's contribution?—I think in some cases it is made the subject of oppression, by taking advantage of their necessities to get out of them their labour at a low rate."

422. " What are the principal lines of communication which you think it would be most desirable to make with reference to the unfolding the resources of the country?—I cannot specify the particular lines; but the districts generally of Galway, Mayo and Clare, and I believe parts of Donegal; Mayo in particular.

423. " Have you taken into consideration the districts adjoining the counties of Kerry, Limerick and Cork?—All these counties also are very susceptible of improvement in that way."

526. " What are the number of miles of general lines of roads of great and pressing importance which you think desirable to be immediately made, and what would be an approximation to the expense?—I should think at a rough guess, that 200 miles would not be saying too much.

527. "What would be the probable expense?—The probable expense might be 120,000*l.*, about 600*l.* a mile perhaps.

528. "And is this the whole extent of the great lines of communication which you would contemplate making out of the public funds?—It would go beyond it.

529. "How much beyond?—I have not made a correct calculation; it would require some researches with reference to that particular object. I gave too precise an answer when I said 200 miles; there are at least 100 miles in Galway and Mayo alone that might be made with very good effect."

AS TO FUTURE LOANS.

After four years' experience of the working of the Act, Your Committee feel themselves authorized in stating, that although strict in many of its terms, it has been of much and essential service to Ireland. Your Committee, however, beg leave to observe, That the prescribed terms are so severe for individuals, only three or four Loans have been taken; and even in respect of public bodies Loans which might have been safely made and most usefully applied, could not be obtained under the Act, (Colonel Burgoyne.) And it is in evidence before Your Committee, that in consequence of the strictness of the terms on which Loans are required to be made by the present Act (355 to 369, 374, 394, 549 to 560, 573, 587, 826, 909, 988, 1013, 1035, 1051, 1067, 1225.) the benefits which might flow from them under less restrictions, yet with equal safety to the Loan Fund, have not been diffused commensurately with the objects for profitable outlay, to which the fund was originally designed to be applied.

It also appears that the rate of Interest chargeable on the Loans, as stated at the commencement of this Report, is considered high with reference to the cost of the Loans to Government, the nature of the objects for which the Loans are required, and the present general rate of interest on money. (398, 402, 650 to 658, 909, 988, 1001, 1015, 1018, 1059 to 1063, 1066, 1083.

Your Committee find, from the experience of the Loan system introduced into England under the Commissioners for Loans in 1817, that the best possible effects have been produced. By the Evidence of Mr. Brickwood, it appears that since the year 1817, the sum of £.5,300,000 has been advanced by the English Loan Commissioners on the security of Roads and other Public Works in England, and nearly £.200,000 in Ireland, out of the £.250,000, the sum provided by that Act for Ireland.

Previously to the issuing of Exchequer Bills under the present Act, (which is a revolving fund, the issue of Exchequer Bills being always to be available to the amount of £.500,000) a sum of £.500,000 has been from time to time appropriated (and which was advanced out of the Consolidated Fund) for similar Loans in Ireland, under the authority of various Acts of Parliament.*

Geo. 4, c. 112.
Geo. 4, c. 35.
Geo. 4, c. 101.
8 Geo. 4, c. 12.

Of the £.5,300,000 advanced in England, the sum of £.2,000,000 is now and has been outstanding at an average rate of interest of £.4. 2. 6. per cent., whilst Government, after the first year of issue, only pay an interest of 2½ per cent.; so that the gain to Government is nearly £.40,000 a year, and although the Commissioners in England are not in the receipt of the interest on the whole sum outstanding, after allowing for all expenditure;

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* These sums are exclusive of the monies lent by Government to Grand Juries in Ireland, for the building of Gaols, Court-houses and Infirmaries, and which are either actually paid or in the progress of repayment.

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diture, there is an annual sum of £.30,000 received by Government, over and above all losses which have occurred.

In proportion to the amount, an annual Surplus must have arisen, and must continue to arise, upon the sum of £.500,000 issued under the present Act.

It is also in evidence, that the operation of the 18th and 48th Sections already referred to, have very much deterred persons from borrowing money under the Act, or becoming sureties for others, or shareholders in useful undertakings; and it appears to Your Committee, that if the security was taken to the Commissioners without making the party entering into the security a Crown debtor, the same if not greater security would be afforded, as persons would be more likely to become sureties. And in reference to the 48th Section, it appears to Your Committee that the precautions taken by the Board as to security would admit of some relaxation in the rigour of this clause.

It is also in evidence (Colonel Burgoyne, 1125 to 1133.), that the present Loan Fund, or power of issuing Exchequer Bills to the amount of £.500,000 to lend for Irish Public Works, is inadequate for the wants of Ireland; and it is recommended that the Fund be increased.

A loan has been made by the Commissioners in England to the Ulster Canal Company, at the rate of 3¼ per cent.

Under the present Act, 25 years are given for the repayment of loans for Public Works; interest at £.4 per cent. is required, and a sinking fund of £.4 per cent.

It appears to Your Committee that in order to lighten the pressure upon the resources of the borrowers at the commencement of their undertakings, the sum required for the repayment of the principal, together with the interest, should be fixed and invariable throughout the entire time for which the money is lent. It is in evidence (*see* Appendix, the Evidence of Mr. Mahony) that a fixed payment of £.6 per cent. continued through a period of 29 years will pay an interest of £.4 per cent. on the sum advanced, and pay off the entire principal. If the interest was reduced, the principal money would of course be sooner repaid by means of this fixed payment.

Your Committee, after mature deliberation on the Evidence obtained under these important heads of their Inquiry, beg leave to recommend to the consideration of The House,—

1. That the Loan Fund be increased by a power of issuing Exchequer Bills for an additional sum, which, together with the £.500,000 already granted, shall be a revolving Fund for annual outlay in Loans.

2. That the Lords of the Treasury shall have power to reduce the rate of Interest payable upon the Loans to any rate not lower than the cost to Government.

3. That in respect of Loans to individuals, except in case of a Loan on personal security only, the repayments be a period of time varying from seven to fifteen years; the first repayment to commence at the furthest, at the expiration of five years from the commencement of the Loan.

4. That in respect of Loans for all Public Works, except Loans to Grand Juries, the repayments be made by half-yearly instalments at the annual rate of £.6 per cent. on the original amount, out of which the interest is to be deducted at the rate agreed upon.

5. That the Shares and Stock of all such Public Companies as shall be approved by the Treasury, may be taken as Securities, as well as Government and Bank Stock, Exchequer Bills and India Bonds.

6. That power be given to the Lords of the Treasury to enlarge the time for repayment on the agreement for the Loan.

7. That the writing obligatory required by the 18th Section of the Act be given at the discretion of the Lords of the Treasury, either to His Majesty as thereby directed, or to the Secretary of the Commissioners, so as to relieve the party from becoming a Crown Debtor.

8. That power be given to the Lords of the Treasury, if they shall think fit, to dispense at the time of the contract for the Loan with the obligation contained in the 48th Section.

Your Committee having received several suggestions, recommending that the loans borrowed from the Board of Works should be first charges on the estates improved, taking priority of all previous incumbrances, inasmuch as by the outlay of the loans the estates would be enhanced in value, they are desirous of calling the attention of The House to the recommendation, without offering one on their own part; but they suggest whether, in the event of its not being considered politic to adopt the recommendation, it would not be just to make the loan a first charge on the particular portion of the estate reclaimed or improved by the outlay of it.

Your Committee also beg leave to call the attention of The House to a provision in the French law, whereby it is directed that previously to the commencement of improvement of waste lands, such waste lands should be valued, and the claim of the mortgagee or incumbrancer on that portion of the estate is limited to the amount of the valuation.

It has also been suggested, and to which suggestion Your Committee beg leave to call the attention of The House, that to relieve borrowers from a portion of the expenses attending on the completion of Securities, the Solicitor of the Board of Works should be empowered to require the Officers of the Irish Courts, and of the Registry Office, to make searches for Incumbrances and Settlements affecting the properties on which Securities shall be offered; and that such Officers shall not require any fee or duty for such searches: the searches in those cases to be retained in the Office of the Board of Works, and used only for official purposes.

It has also been recommended to Your Committee, that the regulations of the Act as to loans might be relaxed in favour of tenants for life, or other persons having particular estates, so as to enable them to charge the outlay on the inheritance, as in cases of grants, (1043, 1054 to 1059.) where they are empowered to charge on the inheritance a moiety of the contribution for roads and bridges. Your Committee recommend that this power be given, but with the sanction of the Court of Chancery to be obtained previously to the making of the contract, by petition in a summary way, and the outlay in no case to exceed three years' annual value of the estate. On the repayment of such loans, the tenant for life, or other person having a particular estate, to have a lien on the inheritance for the amount repaid out of the rents and profits accrued due during the continuance of such life or particular estate. This principle is recognized by the law of Scotland; in England, by the Inclosure Acts; and in Ireland, by the Acts for encouraging the planting of trees.

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Your Committee cannot leave this part of their inquiries without strongly expressing their opinion, that the maximum of interest receivable by the Commissioners of Public Works should be £. 4 per cent.

AS TO FUTURE GRANTS.

Your Committee have already stated that the Grant Fund provided by the Act, amounting to £.50,000, to be disposed of in contributions of a moiety of the expense of constructing roads through waste tracts in remote districts, and small fishery piers on distant parts of the coast, has been nearly exhausted, and, as it appears, chiefly by aids to Grand Juries. Only a small part has been obtained by individuals (468.) It has been strongly urged that an additional Grant be applied for similar objects, as well as for useful Public Works of any description (469.); and as Moiety Grants in aid of undertakings by individuals, where no direct tolls or profits would arise; and also for the whole expense of works in remote poor districts, where a moiety of the expense could not be obtained either from individuals or public bodies (1137 to 1149.), and in completing the roads already commenced by Government, but which remain in an unfinished state, and whereby the greater part of the advantages to the public are lost.

Your Committee beg leave also to state, that scarcity and distress most frequently occur in those districts where there is a deficiency of roads and means of communication. Such is the case at the present moment.

Your Committee, in reference to the extension of roads, have already pointed to the extraordinary advantages which have been obtained by an expenditure of public money in the carrying on of works through the remote districts of Ireland.

In Scotland, similar results followed similar operations—(Mr. Loch, 151 and 203.); and in that country, grants were made for roads and bridges, from 1803 to 1821, both inclusive, amounting to £.492,670. 10. 5.

Looking to the amount of outlay in Scotland, and the advantages which have flowed from the former, as well those which have been obtained by a much smaller outlay in Ireland, Your Committee recommend that an additional sum be placed at the disposal of the Irish Board of Works, to be expended on all works of public utility, where no private profit shall arise, and where public bodies or individuals shall contribute one-half of the expense. Your Committee also recommend to the consideration of The House, whether similar powers should not be conferred on tenants for life, trustees and other persons, having only particular estates, in reference to the construction of small piers, quays and harbours, as by the present Act are given in respect of roads and bridges, for enabling them to raise their moiety of contribution; and also whether the stipulation required, as to the future maintenance and repair of such small piers, quays and harbours, may not safely be dispensed with, particularly if the recommendation of Your Committee, contained in a former part of this Report, as to Tolls, be adopted; and also whether the stipulations as to the person or persons who shall apply for such moiety, entering into security to defray all monies beyond the estimated expense should not be confined to one-half of such increased expenditure. The same remark is applicable as to Grand Juries; and Your Committee beg leave also to suggest, that no compensation should be given for the lands taken for roads or bridges through any wild or remote districts.

AS TO THE EXECUTION OF PUBLIC WORKS.

Your Committee recommend, that all Works for which a Grant shall be made, or for which the *whole* cost shall be lent, be executed under the sole direction of the Board; and that when a Grand Jury shall contribute towards the expense of a work, it should appoint a Committee to communicate with the Board before making a final presentment for the contribution; and the Board should be required to furnish the Grand Jury with a full account of the expenditure, on the completion of the Works.

Your Committee also recommend, that the labourers and workmen employed should be paid weekly, as far as circumstances will allow; and that in the case of contracts, the Board of Works should stipulate with the contractors that the wages of the labourers and workmen should be paid weekly.

SMALL PIERS, QUAYS AND HARBOURS.

The power of the Irish Board of Works for aiding in the construction of small piers, quays and harbours, is confined by the present Act to the sea-coast; and grants for such objects are limited to £. 1,000 for one work. (472 to 475.) It has been recommended to the Committee that it would be very advantageous to the country were this power extended to available localities along navigable rivers and lakes. On this object the Committee beg to refer to the Evidence of Mr. Charles Wye Williams. And for the means of constructing these desirable works, necessary for protecting the fisheries and facilitating and extending inland trade, Your Committee recommend that Grand Juries should have the power (not now possessed by them) of presenting for a moiety of the cost of such works, to be levied off the district in which they would be situated, (476 & 850.) but the levy not to exceed the amount of the utmost grant which the Board of Works is authorized to make in aid of them, viz. £. 1,000. With respect to the question of Tolls (689, 691, 712 to 723, 959 to 965,) proposed by some of the Witnesses to be levied for the maintenance of such works, it appears to Your Committee, that for the purposes of maintenance and protection, small tolls may be usefully imposed on such works; and that the Board of Works should be authorized to lease such tolls. The lessee to be bound also to protect the works; and that no tolls should be levied unless approved by the Board of Works, such tolls being previously fixed and published.

SAFETY HARBOURS.

On the coast of Ireland there are numerous eligible sites for Safety Harbours, where an outlay of no very great amount, comparatively with its advantages, would be sufficient to render those natural asylums secure havens for Commercial Shipping; but where there is no prospect of pecuniary profit to induce an outlay by individuals or companies;—and there, Your Committee beg leave to call the attention of The House to the Evidence on this point, showing that a rational outlay for suitable defences at such stations, and for removing dangerous rocks and making navigable certain passes or straits between the main land and contiguous islands, would be of great importance to the Shipping and Insurance interests of Great Britain, while promoting local benefits in Ireland, by affording employment and encouraging the deep-sea fisheries.

INLAND NAVIGATION AND RAIL-ROADS.

Under the present Act, the Board of Works cannot make *Grants* for improving the Navigation of Rivers, but may lend for all Public Works.

It has been suggested, that for the purpose of improving the navigation of Rivers and Lakes, or extending Canals, it would be politic, whenever individuals shall subscribe a *contribution* of *one-fourth* of the estimated charge, or the lands benefited shall be made liable to *one-fourth* of this charge, that Government shall contribute another *fourth*, and that the remaining *half* shall be lent by the Board of Works, to be repayable by half-yearly instalments, at an average rate of 6 per cent. on the loan, in which the accruing interest on the loan is to be included; these repayments to be raised by tolls terminable on the extinction of the debt, or by other approved means. In all such undertakings, the Government would require to be satisfied that the tolls of the navigations would provide for the repayment of the loan, and that the cost would not exceed the estimates; otherwise, of course, the proposed contribution would not be made. Your Committee therefore recommend this suggestion to the consideration of The House; it being obvious that there cannot be an improvident outlay under such limitations, and that Navigations, so formed, must become of great local or even national importance.

Looking, however, to the condition of Ireland, Your Committee foresee that undertakings of the kind must be very limited when individuals (either subscribers or proprietors) must bear *one-fourth* of the cost; and they beg leave to suggest that other measures should be resorted to for improving extensive lines of inland navigation. For this object, they consider that it would be sound policy to make a liberal outlay of public money, as the advantages to be obtained are equal in national importance to any for which the public money is applied, next to the maintenance of the Government. And they recommend that it shall be the duty of the Board of Works, under the sanction of the Treasury in each case, to investigate the expediency and estimate the expense of all such improvements, on the requisition of Grand Juries or Baronial Sessions, and report to Government the probable advantages and cost of the required Works; each Report to be laid before Parliament previously to the time for considering the Estimates of the year.

Whether Your Committee consider the extension of Canals as a means for facilitating internal intercourse, (and to Canals all the previous observations on Roads are strictly applicable,) or as one of the best means of draining and improving bogs and wastes, whether as an abundant source of employment for the poor, not merely in their construction, but to a far greater extent after their completion, or with reference to the vast sums already invested, and in which Government are directly interested to a very considerable extent, they are strongly impressed with its importance as one of the most powerful agents of national improvement.

The introduction of Railways, if practicable, would also be attended by so many obviously important advantages, that the Committee do not hesitate to class them with Canals, as works of primary importance.

One of the principal objects of the Loan system, and of the present Act, was to encourage the application of private capital and enterprise in promoting public works of this class, and Your Committee attach much importance to the operation of private capital and public credit, in promoting works of this class, where the parties who originate the undertaking and by whom it is to be managed, have a direct personal interest in its prosperity, and give the best possible evidence of the sincerity of their views, by contributing a large portion of the cost.

It has been suggested to Your Committee, that in such cases and for such objects, where the parties offer to advance one-third of the actual cost of the undertaking, the Board of Works should be authorized to advance the remaining two-thirds, one-third to be repaid with interest in the usual manner, and the remainder as a grant; in this case the Company to be restricted from dividing a greater amount of profit than 10 per cent. per annum until they paid off the amount of the Grant as well as the Loan.

A modification of this plan has been suggested by Mr. Cubitt, namely, that of the two-thirds proposed to be advanced by the Board of Works, one-half should be secured upon the work, to be repaid by an annual charge of five per cent. for 31 years, which is equivalent to paying three per cent. interest and investing two per cent. as a sinking fund, and that whatever profit shall arise from the work over and above five per cent. per annum during the repayment of the first part of the Loan, shall go to the Company, and that so soon as the first part of the public Loan shall thus be paid off, the *entire surplus*, over and above five per cent. per annum on the private advance, shall then be applied to the repayment of the second part of the public Loan, but without interest; after which the entire profit may be divided by the Company.

This plan appears to deserve attention, inasmuch as it establishes a mutual interest between the lender and the borrower, as the latter can never enjoy the full amount of his profits while the former remains unpaid; and as likely to bring forward a large amount of private capital in furtherance of Public Works of great national utility as well as emolument, and thus confer benefits on Ireland which neither public nor private capital separately employed could ever accomplish.

On the general principle of improving, or opening, inland Navigations, particularly as it applies to the Shannon and its tributary rivers, Your Committee have received much useful information from Colonel Burgoyne, and Mr. C. W. Williams, one of the Directors of the Dublin Steam Packet Company (506; 536 to 542; 834; 941 to 965.), and they consider the suggestions of those gentlemen worthy of the most serious consideration.

WASTE LANDS.

Your Committee reserve for a further Report the recommendations which they propose to found on the evidence they have taken, and are obtaining, in relation to the reclaiming of the Irish Waste Lands; and they will in that Report apply themselves to the consideration of various suggestions before them, as to the best means of improving the condition of Ireland generally, by promoting the employment of the people throughout the country. For the present, they are desirous of calling the immediate attention of The House to the objects included in this Report, as the ordinary wants of the labouring population in the districts principally referred to, are now seriously increased by the scarcity and dearness of Potatoes, on which the peasantry there exclusively subsist; and it is desirable that any proposed measures for enlarging the operations of the Board of Works, in those parts of the country, be speedily adopted.

June 1835.

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SECOND REPORT.

THE SELECT COMMITTEE appointed to inquire into the AMOUNT of ADVANCES made by the COMMISSIONERS of PUBLIC WORKS in *Ireland*, the Regulations under which they were made, the Purposes to which they have been applied, and the AMOUNT of REPAYMENTS; to consider also the various Reports made by Committees and Commissioners on the subject of reclaiming WASTE LANDS in *Ireland*, and to what extent the suggestions which they contain have been complied with;—and to report from time to time to The House, together with the MINUTES of the EVIDENCE taken before them:——HAVE concluded the inquiries directed to be made, and having in their FIRST REPORT applied themselves to the consideration of those within the first division of the objects for which they have been constituted, they submit, in this their SECOND REPORT, the results of their inquiry into the reclaiming of WASTE LANDS, and the Recommendations which they have resolved to found on it.

THE Reports of Committees and Commissioners, in which the policy and practicability of reclaiming Irish Waste Lands are investigated or referred to, are the Second Report of a Committee of the House of Commons, appointed in 1819 to inquire into the state of Ireland, (presented 7th June 1819); the Reports of another Committee of The House on Emigration; also the Report of the Committee on the state of Ireland, appointed by The House in 1830, and the Reports of the Commissioners appointed by the Crown on the 15th September 1809, to inquire into the nature and extent of the several Bogs in Ireland.

These Reports point out the advantages derivable to the State, the community, the labouring classes and to England, from reclaiming the Waste Lands of Ireland, and are founded on the most convincing evidence of the facility with which such Wastes may be reclaimed. But it appears from the Evidence obtained by Your Committee, that no effort has been made to realize the advantages pointed out, except in a few cases. In these, however, the success has been most complete, and therefore they present undeniable proofs of the practicability and importance of the operations proposed in the Reports.

Your Committee refer for the details of these beneficial results to the evidence of Mr. Fetherstone, (2362.), of Mr. Griffith, (2595 & 2783.), of Mr. D'Arcy, (1951.), of Mr. French, a Member of Your Committee, (3114.) in which, as well as in the evidence of Mr. Bald, (2512.) there is very important information as to the extent and nature of the various Waste Lands in Ireland, and the cost of rendering each kind arable.

There are four denominations of Waste Lands in Ireland,—the red bog; the black bog; mountain land; and lands, inundated by rivers.

The utmost expense of reclaiming the first, the red bog, is stated by Mr. Fetherstone at £.13 an acre, and he values that which he has reclaimed as being worth a rent of £.1 an acre. To relieve the low black bog has required an outlay of £.6 an acre, and he considers it worth a rent of £.2 for meadow, or £.3 if in a district requiring much meadow land, (2368.) The expense of reclaiming mountain bog consists principally in the charge for cutting drains, the expense of which is inconsiderable. When the drains are formed, the soil is at once brought into cultivation by burning the surface peat. Mr. Fetherstone (2408.) states that the mountain soil can be reclaimed at a very small expense, The cost of reclaiming flooded lands must depend on the extent of the river causing the inundations, or of the value of the mill or fish weirs by which the overflow is occasioned. Mr. Griffith states, (2787.) "I know instances where several hundred acres of valuable meadow land are rendered almost a waste in consequence of a common mill weir, which mill is not worth £.20 a year; eel weirs also present impediments that should be removed." Immense tracts are wasted by the inundations of the Shannon and its tributary rivers; but the expense of reclaiming them depends on the extent of natural obstructions to be removed for the purpose of giving a free flow to the rivers. Colonel Conolly, a Member of Your Committee, states, (1241.) that by an outlay of only £.27 a drainage has been effected on his estate in the county of Donegal, which has enabled the Grand Jury to form a new and level line of mail-coach road through a mountain district; that "the climate has been much improved, and a great quantity of land has been brought into cultivation by deepening, straightening and discharging the small lakes and rivers."

Your Committee in their First Report have recommended the adoption of measures for extending lines of road through uncultivated tracts, and the erection of piers and quays for promoting industry permanently, and providing immediate employment for the peasantry of the remote districts; these works, however, would not lead to the complete accomplishment of their object, without being accompanied or succeeded by very extensive operations for reclaiming Waste Lands. The formation of roads and of quays on navigable rivers and lakes would indeed promote those operations, but are by themselves not calculated to give the country all the advantages derivable from an increase of its productive territory, and the improvement of its husbandry.

The operations for reclaiming wastes would also be more diffused than those on other Public Works, as in almost every county throughout Ireland there are large tracts of reclaimable Wastes; and additional employment may therefore be thus created for all the peasantry, without drawing them far from their present habitations, or unduly augmenting the population of any one district, which has often been the result of ordinary public works, and has been followed by great distress among the labourers.

Increasing the arable land of the country would also have the effect of breaking up the densely populated cottier settlements on the lands now in use, and of abating those fatal contentions which have been incited among the peasantry by competition for land. The increased demand for labourers would induce a large number to abandon the cottier holdings, preferring to work for hire, with a reasonable certainty of continuous employment, rather than be subject to a rent, which leaves them only a scanty subsistence as their compensation for a year's labour.

Unhappily

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Unhappily for Ireland, and for the whole kingdom, it has not been heretofore considered sound policy to adopt any public measures towards the development of these extraordinary sources of wealth, or *practically* improving the condition of the Irish peasantry; and hence that fine and fertile country presents so much misery, discontent and crime.

Your Committee cannot concur in the opinion that the social disease of Ireland is produced by a real excess of population. It may be doubted whether the country does contain a sufficient quantity of labour to develop its resources; and while the empire is loaded with taxation to defray the charges of its wars, it appears most politic to use its internal resources for improving the condition of the population, by which the Revenue of the Exchequer must be increased, rather than encourage emigration, by which the Revenue would suffer a diminution, or than leave the labouring classes in their present state, by which poverty, crime and the charges of Government must be inevitably extended.

In 1728, when the number of the people did not exceed a fourth of the total now existing, there appears to have been comparatively as much distress, occasioned by want of employment, as there is now; and Primate Boulter, in his published Correspondence with the British Government, as one of the Lords Justices during the absence of the Lord Lieutenant, makes the following Report on the state of the Peasantry:—

"When I went my visitation last year, barley in some inland places sold for 6*s.* a bushel, to make the bread of; and oatmeal, which is used for the bread of the North, sold for twice or thrice the usual price; and we met all the roads full of whole families that had left their homes to beg abroad, since their neighbours had nothing to relieve them with. I fear many hundreds perished by famine. Now the occasion of this evil is, that many persons have hired large tracts of land, on to three or four thousand acres, and have stocked them with cattle, and have no other inhabitants on their land than so many cottiers as are necessary to look after their sheep and black cattle; so that in some of the finest counties, in many places, there is neither house nor corn-field to be seen in ten or fifteen miles' travelling; and daily, in some counties, many gentlemen (as their leases fall into their hands) tie up their tenants from tillage."—*Letter to the Duke of Newcastle, 24th February* 1728.

One of the consequences of the misery caused by the want of employment in Ireland, is an extraordinary increase of the population in the districts where most poverty exists, as compared with the increase in parts of the country where the peasantry are in improved circumstances, and proportionably provident. It appears by the Census Returns of 1821 and 1831, that within the period of ten years the population of Mayo, Galway and Clare increased 24 and 25 per cent., notwithstanding a copious emigration to America; when that of the better conditioned counties of Down and Wexford increased only 7 and 8 per cent., although emigration from these counties has been less.

It appears, moreover, that it is from the counties of Mayo, Galway and other poor Western districts, the labourers migrate annually to England in so great numbers; and it is in evidence that much less remunerative employment at home would detain them in Ireland, like the labourers of the Eastern districts, who although nearer to England, do not migrate. Mr. Griffith states, (2830.) that in the present year he was enabled to stop 500 labourers, who were on their way to England, by giving them employment on Public Works.

In providing the labourers with employment at home, settled habits of industry would be promoted among them, and local trade would be enlarged, creating new sources of employment. At present the greater

part of the peasantry in the western districts acquire their annual stock of subsistence by working in the summer. Their earnings in England, and in the Eastern Irish counties, enable them to procure some clothing, and to pay the rent of their cabins and potatoe land; but if the potatoe crop be a failure, its produce is consumed long before they can acquire new means of subsistence, and then a famine ensues. One of these lamentable contingencies has happened in the present year in some of the western districts. Thus, the present system not only creates poverty, and rapidly augments the population, but also entails on the country all the horrors of famine. It is also a fruitful producer of crime, by giving to a large portion of the population months of idleness in every year, which cannot possibly be well spent by an uneducated, miserable and excitable peasantry.

Your Committee have abundant testimony of the happy change effected in the habits of these poor people when provided with continuous employment. They refer particularly to the evidence of Mr. Griffith, who has had so many opportunities of observing the transition in several parts of the country. Mr. Fetherstone states, (2431.) "My property became safe when I commenced these large works. I never had a sheep taken from me, or suffered any of those trifling thefts which they were in the habit of committing when unemployed."

Having such evidences of the practicability and importance of reclaiming the Irish Waste Lands, Your Committee lament the indifference with which it is stated that the majority of resident landlords in Ireland regard those undeveloped sources of public and private wealth; and they apprehend that the greater part of these lands will remain neglected if left entirely to private enterprise, and the disposition of landowners.

There are, besides, many causes to obstruct improvement other than the indifference of the proprietors; the want of experienced undertakers in whom landowners and leaseholders could confide, both as to their skill and their estimates of the outlay; the necessity of co-operation among the owners and holders of adjoining properties, which may be prevented by disparity of interests and the apprehension of difficulties and litigation, in ultimately adjusting them, and allocating the outlay; and the very general existence of incumbrances, which prevent borrowing for the purposes of improvement.

Your Committee have fully considered these difficulties, which largely exist, and therefore proportionably obstruct the improvement of the country; and they have resolved on submitting the following propositions to The House:

1. The Board of Public Works in Ireland to have power to undertake, on the requisition of the Proprietors of two-thirds of the property to be improved, Drainages of Bogs, Embankments, and the removal of Obstructions in Rivers which cause inundations.

2. Juries to be formed for valuing Mill Sites and Fish Weirs, and also to ascertain the increased value of the lands drained, freed from inundations or otherwise improved, and apportion the outlay to the several properties, according to the benefit derived to each estate or interest.

3. The Outlay apportioned to be a charge upon the estate or interest benefited.

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4. The Board of Works to be compensated in money or a sufficient portion of the waste land improved, and powers to be given for that purpose, and also either to sell or mortgage a sufficient part of the whole estate any portion of which shall be benefited.

5. Tenants for life to have power to charge the inheritance with an outlay, to the amount of three years' value, under the directions of the Board of Works, for the drainage, embankment or other permanent improvement, save buildings; the Board in the first instance to make a Report, in which the feasibility of the improvement, when projected, shall be certified; this Report to be laid before a Master in Chancery, with an application from the party to the Court, and the Master to make due investigation, and if he approve of the project as being of such utility to the Estate that the inheritance should bear the charge authorized to be placed on it, then to certify the same to the Court, and the certificate to be enrolled for the purposes of title, and the Tenants for life to have power to sell or mortgage to the amount of such outlay any part of the Estate which, or any portion of which, is to be improved.

6. Tenants for life paying any portion of the outlay, with their own monies, or out of the rents and profits, to be entitled to a charge of that amount on the inheritance, but to be bound to keep down the interest of such charge.

7. Where lands are mortgaged, the Wastes to be valued, and the incumbrances to have operation on such portions, as liens to the amount only of the value ascertained anterior to the improvement; that is, if the Wastes prove worth £.200, the Mortgagee to have a lien on them only to that amount, and the enhanced value to be susceptible of new incumbrance for the purpose of improvement.

8. Mortgaged Lands, where the rent to be received in respect of which will not exceed 2*s.* 6*d.* an acre, to be let by the Proprietor under the approval of two Arbitrators, one named by him, and the other by the Mortgagee; and in case of default of naming such Arbitrator by the Mortgagee, then to let under approval of the Court of Chancery, to be obtained in a summary way by Petition.

9. Enlarged powers of leasing to be given to the Board of Trinity College, Dublin, and the Board of Commissioners of the Schools founded in Ireland by Erasmus Smith.

10. Reclaimed Wastes, which shall be conveyed to the Board of Works, to be sold in small lots of not less than 10 acres, or more than 200 acres, statute measure.

Your Committee recommend, that the Reports of the Irish Bog Commissioners appointed in 1809, and the Maps belonging to them, be deposited in the Dublin Society House, or the office of the Board of Public Works, arranged and set apart for public inspection at the house of the Society, or the office of Public Works in Dublin; and that copies of all the Reports and Maps be deposited for the same purpose in the British Museum, the Dublin Library, and the Public Record and Registration Office in the Custom House of that city; and Your Committee recommend the publication of such of the Maps as have not as yet been published.

Suggestions have been made to Your Committee by Mr. Griffith, for transferring the fiscal functions of Grand Juries to Barony Boards, for

the purpose of promoting measures to secure employment to the peasantry on roads and other public works, when farming employment is diminished; to which suggestions Your Committee beg leave to direct the attention of The House.

Your Committee's attention has been called to the process of Custodiam in Ireland. Your Committee, in the words of the Committee in 1830, "have no hesitation in expressing their decided opinion that this system, objectionable in itself, and animadverted upon as it has been both by the Parliamentary Commissioners and Committees, is an evil and an abuse which requires immediate and effectual reformation;" and Your Committee are therefore pleased to find that a Bill has been introduced into Parliament for the purpose of abolishing this process.

Since the First Report of Your Committee has been circulated, Mr. More O'Ferrall has been examined by Your Committee, and it appears from his evidence that Colonel Burgoyne was mistaken in respect of the number of miles that would be saved by the road alluded to by him; and that instead of seven miles, two miles only would be saved in the distance to Carlow; and Colonel Burgoyne is himself desirous that this mistake should be corrected. But this does not alter the opinion of Your Committee, that the power recommended by them in their First Report to be given to the Board of Works, as to Roads passing through different counties, should be conferred.

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MINUTES OF EVIDENCE.

Mercurii, 25° die Martii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

John Rickman, Esq. called in; and Examined.

1. DID you not act as Secretary to the Highland Roads Commission Board several years ago?—Yes; and also for the Caledonian Canal, from the year 1803 to the year 1828.

2. How was that Board constituted?—It was constituted of persons all Members of Parliament in the first instance; and when any vacancy occurred, it was supplied by The King's Commission, appointing some other Member of Parliament.

3. Did the Members act gratuitously?—Yes, they acted gratuitously.

4. They were named under the Royal Commission?—The Commissioners were appointed in the Act by name; afterwards, vacancies were filled by Royal Commission.

5. When did they commence their labours?—In 1803.

6. The object was to make roads and bridges in districts which were then shut out from communication with the more cultivated parts of the country?—The object of the Highland Road and Bridge Act was to make roads and bridges in the more inaccessible parts of the Highlands of Scotland.

7. What sum of money was granted by Government to them for that purpose originally?—The original Highland Road Act contained a grant of 20,000 *l.*; the Caledonian Canal Act (of the same Session) also 20,000 *l.*

8. For what purpose was the first of these sums to be applied?—Under the Highland Road and Bridge Act it was applied so that a moiety of the expense of road-making should be paid from this grant; and a moiety of the expense by the heritors, the land proprietors.

9. Originally it was applicable to roads made for private individuals?—Originally it was applicable to all roads, in cases where the individuals undertook to pay a moiety of the expense; but this not being found to answer the purposes of comprehensive improvement, the several Highland counties obtained Acts of Parliament for an assessment applicable to such purposes, by which aid roads were carried throughout the Highlands to the North and West Seas.

10. Under those Acts the counties had powers to tax themselves?—Yes.

11. To what extent?—I am not able to specify the extent. Local taxation in Scotland is imposed according to a valuation made about the time of the Revolution, and still called the valued rental, which differs so much from the actual rental, that it is impossible to say what the rate of assessment is. The Inverness-shire Act of 1804 imposed a tax of one shilling sterling on each pound *Scots* (twenty pence) of valued rental; but when the Commissioners found it necessary, in 1819, to obtain an Act, providing for the maintenance of the roads and bridges made under their direction, the counties were assessed according to the proceeds of the Property Tax in the year 1814.

12. Did Government give the counties assistance in making roads?—They were authorized originally to accede to the application of private individuals, who paid a moiety of the estimated expense; and under these Acts, the individuals who advanced such moiety were to be repaid from the county assessment.

13. Then all the roads were, of course, public roads?—Yes.

14. How did you distinguish the roads made under the power given by these Acts, and the roads made upon the application of private individuals?—There was

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no official distinction; the individuals were reimbursed from the county assessment. The Commissioners had, properly speaking, no connexion with the county Acts.

15. Did individuals in all cases reimburse themselves?—Yes, in all cases.

16. Not under the original grant of 20,000*l.*?—From their respective counties, in all cases after the Assessment Acts were in force.

17. The individual applied, and having advanced his money, he was repaid by the county?—Yes; and they were permitted to reimburse themselves retrospectively; which was of small importance; the sum at that time expended being of a very limited amount.

18. There was no general Act; each county applied and obtained a separate Act?—Each of the Four Northern Counties applied to assess itself.

19. After the Acts passed, was there any application made by any individual, offering to pay a moiety, and without having recourse to the county?—After the County Assessment Acts passed, the course of business was this: an individual who wished to make a road, applied at a county meeting before he advanced the money; and the county meeting gave their consent to reimburse him. He then came to the Commissioners; so that the Commissioners had no direct intercourse with the county meeting.

20. He had the consent of the county meeting previous to his application to the Commissioners?—In those counties he always had obtained the consent of the county meeting, which the county meeting was authorized to grant.

21. Supposing he had not the consent, would you have given him the money under the original Act?—The Commissioners would not consider whether he had the consent of the county meeting or not; the Commissioners merely said, "If you will deposit one-half of the amount of the estimated expense, we will undertake to make the road in the usual manner."

22. The Government made annual grants for that purpose for how many years?—Upon reference to Accounts printed in the Reports to Parliament, I find the annual grants were sometimes 10,000*l.*, sometimes 20,000*l.* The annual grants ceased in the year 1818; and afterwards 10,000*l.* was granted in 1821, to enable the Commissioners to satisfy all outstanding claims. In all, the Commissioners received about 250,000*l.*, from Parliamentary grants, and 212,000*l.* from contributors to roads; a disparity which arose from the expense of general management (including surveys and superintendence of contractors), which was wholly defrayed by the public.

23. Government was induced to do this, I take it for granted, seeing the great benefit arising from roads and bridges?—Yes, the making of roads and building of bridges became very popular in the Highland Counties, and Government was persuaded that, by an increase of public revenue following upon the improvement of the lands, they were likely to gain rather than lose by the grants in aid of Highland road making.

24. I believe you are acquainted with Scotland?—I have been in Scotland two or three times.

25. Were you in Scotland previous to making the roads?—No.

26. Were you in Scotland while they were making?—Yes.

27. Did you observe a visible change in the property while the roads were making?—My visits to Scotland were not such as to enable me to answer that question.

28. Did not all parties concur in stating to you that very great benefit was derived from the expenditure?—There were various ways in which I could not help being convinced of that.

29. What were the ways?—Land carriage increased with the facility of carriage, as indicated by the increase of carts made and in use.

30. Was the revenue increased? have you any means of knowing that?—I have no means of particular knowledge; that must stand on general grounds.

31. Was illicit distillation prevented?—I never heard that it had any effect on illicit distillation.

32. Was there an increase of building in that part of the country?—There was some increase of building, and a great improvement in the cottages that were built.

33. Must you not naturally infer from the facility of communication that what produces such a facility must necessarily tend to the prevention of illicit distillation?—I rather believe that the illicit distillation was removed further into the wild country.

34. It had that effect, so far as the country was civilized by the construction of roads?—Yes.

35. Did

35. Did not the making of roads and bridges tend to the improvement in the cultivation of the land?—It tended to the improvement of the cultivation of the land in a remarkable degree. It amounted to an education of all the peasantry in Scotland in the habits of steady labour. In the Highlands there were few good iron tools existing till this time; and the man who had earned a small reserve of money in road-making, carried home with him an old spade and a wheelbarrow, and all the knowledge and good habits acquired by road-making.

36. Were the people anxious to be employed on the roads?—They were very eager to be so employed, chiefly, it seemed, because that was the first time they had ever seen work paid for according to the quantity of work done.

37. You mean by contract?—By task-work, under the contractors.

38. Were all the works carried on by task-work?—There are some kinds of work in road-making which cannot be carried on by task-work; but this is a small proportion.

39. All the rest was?—Yes; my knowledge is of this kind: the Commissioners made a contract with persons who undertook to make the whole or part of a road, and these contractors employed sub-contractors, who headed the gangs of labourers, and virtually made them perform task-work.

40. When the Commissioners advanced the moiety of the estimated expense, and the individual advanced the other moiety, was it the practice for the Commissioners to execute the work by their own engineer, or did the individual execute the work?—It was always under their own direction; the individuals had a right reserved to make observations. When the road was completed, and our officers took it off the hands of the contractor; at that time the individual was called on to be present, and to say whether he was satisfied with the completion of the road.

41. When once you undertook the work it was entirely under your control?—Yes, entirely.

42. Did you find many instances where individuals complained of the manner in which the work was executed?—Never once; the Commissioners kept a surveyor and inspectors, and they caused the road to be made in a better manner than the inhabitants of the country ever expected.

43. By whom were the inspectors appointed?—By Mr. Telford, the engineer; he was the directing person.

44. Through him the inspectors were brought into the service of the Commissioners?—Entirely so.

45. How many were there?—The number of inspectors differed according to the quantity of the work in execution.

46. Were there any specific rules laid down by the Commissioners in appointing inspectors?—While the roads were making, the inspectors were appointed specially for this or that road; after the roads were completed, districts were placed distinctly under the care of inspectors for the repair of all the roads and bridges in each district.

47. After the road was made, did the Commissioners continue to keep that road in repair under contract?—Yes.

48. At whose expense was the repair of the road kept up?—The public paid and still pay 5,000*l.* a year towards it, generally for the maintenance and towards the due repair of Highland roads and bridges.

49. Is that 5,000*l.* given to this day?—Yes, out of the revenues of Scotland, under Act of Parliament.

50. How many miles of road were there made by the Commissioners upon the whole?—By reference to an exact statement, I find the extent to have been 874 miles.

51. Do you know what was the average expense per mile upon the whole?—The average expense at first was not so much as it was afterwards, because the inhabitants of the Highlands becoming more and more sensible of the utility of good roads, desired that the roads might be made in a superior manner; I would say at first the roads cost 300*l.* a mile, and afterwards, towards the close of the work, twice that sum.

52. Do you know what the average charge of the maintenance and repairing of roads is upon the whole number of miles?—I would say it is 3*l.* 10*s.* a mile annually. Besides the roads made by themselves, the Commissioners keep in repair 300 miles of road made in the last century, under the title of Military Roads; and the gradual improvement of these is included in the expense of repair, strictly

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so called; these roads cost 10*l.* or 12*l.* per mile per annum; so the frequented roads of communication; the remote roads from 3*l.* to 5*l.* per mile; when I retired from the service of the Commissioners in 1828, the average actual expense of the road repair was nearly 7*l.* per mile, the public paying the officers employed.

53. What are the officers now employed on the Highland roads and bridges for the purpose of maintaining and repairing the roads and bridges?—A superintendent in Inverness, which is deemed the centre of the Highlands, and six or seven inspectors stationed in several districts.

54. What is the salary of the superintendent?—I think that is 250*l.* a year, with allowance for travelling expenses.

55. What is the salary of the inspectors?—They are paid according to their standing; I think they receive rather less than 100*l.* a year each.

56. Are these officers required to send in reports to the superintendent in Inverness?—Yes; and for this very good reason they send in minute reports, because they are allowed travelling expenses when from home, and consequently they give a correct account of all their movements.

57. Is that independent of their travelling expenses?—No, inclusive of travelling expenses; they are thus paid to induce them to be almost always on the roads, and especially as they are most wanted to be abroad in stormy weather.

58. What description of people are they?—They are usually persons who have acquired a knowledge of the business by having been engaged in making the roads.

59. Are these reports which are sent to the superintendent sent by him up to London?—Yes.

60. Annually?—Yes.

61. And the whole of the expense of general management and superintendence is paid out of the 5,000*l.*?—Wholly, to the amount of nearly 2,000*l.*; the remaining 3,000*l.* goes in aid of the expenses of road repair, in certain proportions allotted to the several counties; beyond that it forms a reserved fund, to provide for any sudden accidents.

62. Do the counties appoint any persons for the purpose of acting on their behalf?—The counties have always been invited by the Commissioners to appoint such persons; but they have not been able to prevail upon them to do it.

63. Are the accounts subject to a local audit, before county Boards or county meetings?—Not subject to a regular audit; but the county meetings may always have the accounts before them, if they please, and the superintendent, Mr. Mitchell attends any county meeting, where discussion of the expense or accounts is likely to arise.

64. What is the mode of repairing the roads?—The manner of repairing the roads is this: supposing a road of 20 miles, a contractor undertakes to repair it throughout the year at so much per mile, and the inspector passing over that line of road, probably oftener than once a month, in case he perceives any fault or neglect in repairing the road, has a right to order the repair at the expense of the contractor.

65. Then it is a common practice for the repair and maintenance of the roads to be undertaken by contractors?— Yes; always except in special cases, which seldom occur.

66. In any case do the inspectors advance money themselves, on their own account, in the repair of the roads?—In no case whatever.

67. With whom are the contracts entered into?—With the Commissioners.

68. Are the contracts taken by the lowest tender?—There is a considerable reluctance in the Commissioners to be governed by the lowest tender. We have found very low rates of contract to be productive of much delay and trouble, and injury to the roads, so that by every possible means we endeavour to avoid it; the Commissioners always struggling against being absolutely governed by lowest tender, and the heritors struggling for it; till after experience, the heritors discover that the lowest tender usually produces the greatest expense to themselves.

69. You have spoken of expressing the opinion of the heritors; in what way is it usual to communicate with the Commissioners upon their part; how do they when there is any difference of opinion, communicate it to the Commissioners?—They communicate with the Commissioners on all occasions, by means of the convener or chairman of the county meetings.

70. Are county meetings ever called for the purpose?—In Scotland there are two county meetings in the year, one called the Michaelmas Head Court, and there is a meeting of the Commissioners of Supply (of the land tax) in April.

71. Who

71. Who are entitled to assist and vote at these county meetings?—There are Land-tax Commissioners' Name Acts occasionally passed in Great Britain, and all those who are named in those Acts are entitled to be present at those meetings.

72. What are the qualifications regulated by law?—There is, strictly speaking, no law for the qualification of the Commissioners of Land-tax; they are named by the County Members, and it is usually supposed that they must possess in land 100 *l.* a year.

73. What is the general average of the number of persons who constitute such county meetings?—It is according to the interest of the subject which is expected to come before them. Sometimes the *sederunt* is more than 30, and sometimes in the same county not above 10.

74. Does it depend on the size of the county, and the population of the county?—It would seem to depend on the number of persons who have the right to constitute the meeting, which is regulated as I pointed out.

75. At these meetings the heritors determine as to the making or repairing of roads, and they communicate with the Commissioners?—Yes.

76. What is then the process respecting the repairs of the roads?—Where any discussion is expected, the superintendent of the Commissioners attends the meeting, and after communicating with him, the meeting decide whether to address a remonstrance or other document to the Commissioners.

77. The Commissioners of Land-tax are named in the Acts of Parliament?—Yes.

78. Are the assessed payers in the habit of nominating some person to represent them at these meetings?—The large proprietors send their agents.

79. Unless they are Commissioners of Land-tax, are they qualified to vote at the meeting?—I cannot answer the question. I can say, in general, that there are larger powers given to agents in Scotland than in England or Ireland.

80. What is the object of their communicating with the Commissioners, as to the repairs of the roads?—They communicate their objections to what may have been done, or they communicate what they wish should hereafter be done, at their pleasure.

81. The Commissioners do not make any grant for the repair of roads, except out of this 5,000*l.*?—The expense of the repairs beyond the 5,000*l.* is paid by the counties themselves. If the county say to the Commissioners, we wish you to incur an extra expense in certain specified repairs; they know that they will have to repay the expense in the next year, after the Commissioners have presented to Parliament an annual account, showing the charges against each county.

82. You have stated in substance the number of miles repaired by the Commissioners, to be upwards of 1,100 miles, at an average expense of 7*l.* per mile; so that the annual 5,000*l.* cannot be sufficient for the purpose?—A part of the 5,000*l.* is intended to exonerate the counties from all expense of management, and the rest of the 5,000*l.* is given partly in aid of counties in certain proportions; moreover, the Commissioners have generally thought it prudent to keep a reserved fund in case of unforeseen accident, such as the breaking down of a bridge.

83. Taking the case you have now mentioned, of the breaking down of a bridge, or considerable damage to a road, do the Commissioners apply for repayment to the counties after that?—They apply it to the counties under certain rules in the Road Repair Act which I cannot now specify.

84. If I understand right, the discretion as to the amount to be distributed is left to the Commissioners, and is not settled by Act of Parliament?—The proportions are settled by Act of Parliament.

85. Suppose an expense is necessary to the amount of 1,000*l.*, are the Commissioners bound to contribute a certain proportion of that, or is it in their discretion to give 300*l.* or 400*l.* or 500*l.*?—It is in the proportion of either one-third or one-half, according to certain rules in the Act of Parliament.

86. With respect to contractors' accounts, do the counties bear the whole of that payment or a share?—A certain proportion, according to the Act of Parliament.

87. By whom is that contribution of the counties' portion paid; is it paid by the heritors or the occupiers?—It is paid (I believe I may say in Scotland) immediately by the landlord.

88. By what process is it levied?—The Scotch law is different from the English law, and I cannot undertake to answer the question. I can only say, I know that it never fails to be levied.

89. Is the heritor empowered in any way to recover it from the occupying tenant?

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tenant?—I do not think he is. The general principle in Scotland is to tax the land-owner for every thing, but I cannot speak accurately on this subject.

90. If one of the inspectors sees a road out of repair, does he call upon the contractor?—If it be an urgent matter he does it himself; and he charges the expense to the contractor if it be a wilful default, within the terms of the contract.

91. If it be an accident, does the county pay?—In usual cases the contractor is forced to repair the effect of accident.

92. Does the superintendence and the management of the Commissioners extend to all descriptions of roads, parochial and so on?—No; only to the old military roads, and to roads made by themselves.

93. How are the parochial roads managed?—The custom in Scotland is different from England and Ireland; every county obtains its own Act; such are called Statute Labour Conversion Acts; under which each county has its own rules.

94. Then it is under those local Acts that they manage all roads of which the Commissioners have not the superintendence?—Exactly so.

95. Do any of those local Acts at present in operation in Scotland admit the principle of election or vestries?—No.

96. Are none of the parochial or other roads in Scotland managed by elective vestries?—No.

97. Can you give us any idea of the principle on which those Acts are founded?—The ancient Common Law of Scotland imposed personal labour on all the inhabitants, to a certain amount, for the repair of the roads, and the nature of these Acts is to make the individuals so liable to labour to pay a small sum of money instead of it.

98. Under these Acts the occupier pays a certain sum?—I apprehend it is paid principally, whether by the occupier or other inhabitant, in equivalent of personal labour; but I fear I should only mislead the Committee in speaking on a subject with which I am little acquainted.

99. In the counties that are more civilized, the commutation of labour for money is more usual?—I believe it takes place in every county of Scotland.

100. By whom is directed the levy and the management of the parochial roads?—By trustees under those local Acts.

101. What is the general principle; is it administered by parochial bodies or county meetings?—I am not competent to answer the question.

102. To what counties do the Highland roads extend?—The roads are principally made in the four northern counties, Inverness, Ross, Sutherland and Caithness; several in Argyleshire, and a small proportion in four other counties. I think our whole list amounts to ten.

103. I understand from you, that in consequence of this continued superintendence of the inspectors, the road is hardly ever out of repair?—Never in a bad state of repair; it is not possible.

104. Are the materials in Scotland, generally speaking, hard, and fit for the making of roads?—I do not think durable materials are very common; but heavy carriages and rapid travelling is very uncommon there. The Highland roads remain in the same state, without very much occasion for repair.

105. Have you limestone near at hand, or is it gravel?—It is commonly said there is no gravel in Scotland; principally, the materials for such repairs in Scotland are found at the bottom of dry torrents, in the dry season.

106. Have they not to carry the materials to some distance?—Yes; but that must be taken into computation by the contractor.

107. Is the substance used hard, or does it become so by time?—It is not a substance that improves by time.

108. Do they generally lodge, for the repairs of the road, materials at the side of the road?—No, that is not the case.

109. Upon many of these Highland roads, is there not, in point of fact, very little traffic?—Very little traffic; there is never any heavy carriage: small carts are drawn by small horses; that is the universal custom there.

110. Do you mean to say that there is little traffic of that description?—There is much traffic of that description, but no heavy carriages.

111. Are the bridges considerably numerous in the north part of Scotland?—Yes; I must distinguish a bridge as an arch; and of bridges so defined, I think we made more than 1,000. It is to be understood that every gullet or siver less than two feet is not a bridge, it is a large flat stone.

112. Did you find that the expense of the bridges constituted a considerable portion

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tion of the great expense of making roads in the North of Scotland?—I dare say one-third part of the expense of making roads, but a very small portion of the expense in keeping them in repair. *John Rickman*, Esq. 25 March 1835.

113. With respect to the roads made by the Commissioners, are there walls to inclose them from the adjoining lands or fences of any description?—There are no walls, otherwise than parapet walls, where the place is supposed to be dangerous.

114. Are there neither walls nor fences except at those places?—No.

115. Then you leave it to the owners of the land to do as they think proper?—Many of the districts through which the Highland roads pass do not pass through cultivated lands in the proportion of one mile in fifty.

Lunæ, 30° die Martii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

James Loch, Esquire, a Member of The House, was Examined, as follows:

116. YOU are acquainted with the Highlands of Scotland?—Yes, I have known them intimately for the last 20 years. I may state also that I am a Commissioner for the Highland roads and bridges. *James Loch*, Esq. M. P. 30 March 1835.

117. How long have you been such Commissioner?—I think about five years.

118. Previously to that time were you acquainted with the Highland roads and bridges of Scotland?—Of the extreme North of Scotland, intimately, for 20 years.

119. How were they constructed; was it partly by grant and partly by the counties themselves contributing a fund?—They were constructed in equal moieties at the expense of the Government grant, and an assessment on each of the counties; the whole of the expense of management being borne by the Commissioners.

120. Were there separate Acts obtained for each county?—Each county had an Act of its own.

121. And who had the power, under that Act, of assessing the county?—It was vested in the same body that managed all the funds relative to statute-labour in Scotland, namely, the Commissioners of Supply; their qualification being, that they should hold an estate of the value of 100*l.* Scots, upon a valuation that was made in the reign of Charles the Second, according to which all the public burdens in the counties were formerly paid; and in point of fact 100*l.* Scots, in the reign of Charles the Second, is of the same value as nearly as possible as 100*l.* a year now. So that gentlemen in the county, having estates of 100*l.* a year, are the persons who have the management of these funds.

122. By whom was the cess paid; was it by the landlord or the occupier?—The assessment to meet the moiety granted by Government was paid by the landlord.

123. What was the average expense of making the roads per mile?—I cannot answer the question, inasmuch as the width of the roads differed from each other, and of course the cost of making the road through so rugged a country as the Highlands, varied in almost every case. At the same time, I can state what were the lengths of the Parliamentary roads made in the two northern counties, Sutherland and Caithness, with the actual sum that was paid for each, and by dividing the one by the other, you get at the result. The road that is known in the North as the coast road of Sutherland, being rather better than 46 miles in length, 16 feet wide, cost 15,569*l.* The road which goes through the centre of the county, called the Tongue road, which is within a trifle of 48 miles long, but being only 12 feet wide, cost 19,902*l.*; that road, however, was very expensive to be made, as it went through a large district of the county where, for many miles, there was no house, and the whole of the workmen had to be hutted, and the oatmeal had to be imported for their support from distant counties, and had to be transported upon ponies' backs to the different places where it was required; besides which, some part of it was extremely difficult to be made through some very rugged vallies, and had to be supported on stone-work, with expensive parapets for the safety of the travellers. In the adjoining county, in Caithness, the cost of the Caithness road, leading from the boundary of Sutherland to the town of Wick, being

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being nearly 25 miles in length, and 16 feet wide, cost 14,448*l.*; and its extension across the county to Thurso, being nearly 21 miles, cost 13,365*l.*, the same width. After these roads were made, a very large portion of each of those counties still remained without any communication, and it became a great object with the inhabitants, who were at first not only indifferent, but rather adverse to the making of the roads to obtain the accommodation which they found good roads gave them, extended to the more distant parts of each of those counties.

124. Do those sums you have mentioned include the expense of any bridges constructed on the respective lines?—Upon the coast road in Sutherland, there is one bridge not included in the sum I have mentioned, namely, at Helmsdale, which is a large bridge over a rapid river, where the foundations were bad, consisting of two arches of 70 feet span each, which cost 2,176*l.*

125. With that exception, were all the other bridges made?—Yes; I may state however that in a mountainous country, as must be well known to every gentleman, there are a number of small arches and conduits required to let the water that descends from the mountains through under the road, and that the cost in consequence is much greater than in a level country. I ought also to add, that there was an arm of the sea, called the "Little Ferry," which intervened in this coast-side road, and which had to be passed by means of a mound, extending to nearly 1,000 yards in length. It was believed that if such a mound was executed, it might benefit the estate of the Duke of Sutherland to a considerable extent; therefore in addition to the moiety that the county proposed to give, the late Duke of Sutherland added 1,000*l.* for the contingent benefit that might arise to his property, if it was executed. The result however was, that it cost altogether 12,500*l.*, and the Duke of Sutherland and the county gentlemen bore all the expense except 4,700*l.* I ought also to state, that in order to avoid the ferry, which is called the "Meikle Ferry," being the great ferry which divides Sutherland from the adjoining county of Ross, the county of Sutherland proposed to Government that an iron bridge, consisting of one arch of 150 feet span, and two stone arches of 60 and 70 feet each, should be thrown over the narrow part of this arm of the sea; that they would contribute one moiety, if the Government would contribute the other moiety. That was agreed to, and the bridge was constructed in Shropshire, and within one year the whole was finished, at an expense of 13,971*l.* And, I might just add, that the consequence was, that it is now possible to travel from London to the remotest northern part of the kingdom without crossing a ferry. When the Parliamentary roads were begun, the opposition to them was very great, and the consequence has been, that the coast-side road has often been taken out of the best line; and there are very inconvenient pitches, and in some portions of it they exist to such a degree that from time to time, as the county have the means, they are obliged to remove some of those difficulties. On all the other roads, however, the greatest possible attention has been paid to conduct them in the best possible manner, so as to avoid any inconvenient inclination. The inclinations on the coast side are occasionally very inconveniently steep; in some instances as much as one in 11, one in 12, and one in 13 for very short distances, not exceeding in any case 160 yards in length.

126. Are the bridges included in the amount of the road to Caithness, and in the road across the country to Thurso?—They are, with the exception of one bridge at Wick, which cost 2,000*l.*, and was constructed sometime before the road was begun.

127. At whose expense?—One moiety at the expense of the Commissioners, and the other at the expense of the Society for the Encouragement of the British fisheries.

128. In the other roads what is the average pitch?—There is no other road that you may not trot up it in a gig, the inclination is so trifling, except in a very few instances on the west and north coasts, where, from the nature of the country, no skill could make them less steep; such cases are few in number.

129. Are there many bridges on the central road, and the Caithness coast road?—There are a considerable number of bridges; not to the same extent as in Sutherland, inasmuch as Caithness is a very level country, except that portion of it which adjoins to Sutherland.

130. Besides bridges, are there not a great number of drains and gullies for the purpose of the passing of the water?—A very great number.

131. There are many other roads, are there not, in the Highlands of Scotland, besides those you have particularly referred to?—Yes, the result of the construc-

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tion of the roads under the authority of the Parliamentary Commissioners has been a great desire to extend all the advantages of such a communication to all the most distant parts of the Highlands, more particularly in those two counties to which I have referred; and I may state, that in Sutherland, since the construction of the Parliamentary roads, there has been very nearly 350 miles of road made in addition, with 134 bridges whose arches exceed 10 feet span, and three chain-boats across three wide rivers. Some of these bridges consist of three arches, and several of two arches of considerable magnitude; and in the county of Caithness very nearly 200 miles of road have been completed, or are in the course of being constructed.—*See* the annexed Map of the Counties of Sutherland and Caithness.

132. Were they all made by grant, and then assessed on each county?—No; they were made under what is called in Scotland the Statute Labour Act, except some of the roads in Sutherland, which were made at the sole expense of the late Duke of Sutherland. I may perhaps state for the information of the Committee, that in Scotland, originally, the mode of making highways was not dissimilar to that which exists even in England at the present day. The labour itself was called out; but that being inadequate to make roads in such a country as Scotland, each county from time to time applied to Parliament to obtain an Act to convert into a money payment the labour which previously had been taken in kind. It is conceived that a great advantage has arisen from that system; as each county has obtained an Act quite suited to its own peculiar circumstances for the purpose of making those roads which are not made turnpike. The counties of Sutherland and Caithness, from their great distance, were later in applying for an amendment of the Statute Labour Act than others in the southern parts of Scotland; but in order to avail themselves fully of the roads made under the authority of the Commissioners, they have both obtained very efficient Statute Labour Acts, with considerable powers of raising money by assessment on the respective counties, and by borrowing money on those assessments; and they are raised or demanded by the same class of trustees as assess the county, for the moiety to be paid to meet that advanced by the Commissioners. In consequence of the particular situation of Sutherland, the county was divided into four districts, and local trustees, having a different qualification, may be appointed by the general trustees to administer the funds of each district, and among these trustees are included the principal tacksmen or farmers; this, however, is peculiar to Sutherland alone. The rate at which the statute labour is commuted for a money payment varies in every county in Scotland. In Sutherland it is paid by the landlord and occupier, paying in equal moieties up to the amount of nine-pence in the pound, according to the last assessment under the Property Tax; and a further assessment of three-pence in the pound may be levied, but that is on the landlord only. Under the Statute Labour Act originally (when taken in kind) all the occupiers were obliged to turn out, with so many carts and so many labourers, and each person in the county was obliged to furnish six days' labour on the roads; that was the old law.

133. How is that nine-pence and three-pence applied; for making the roads, or in the repair of the roads?—Both for the making and the repair of the roads. We are armed with great powers, for we are enabled by the Act to mortgage a certain portion of the assessment, and we raise money on that, and the difference must be kept to pay the interest on the amount so raised, and keep the roads in repair.

134. Have you any fund provided to pay off the mortgage?—There is a certain sum provided.

135. Can you tell us the amount of the sinking fund?—I can by referring to the Act.

136. Is that quite sufficient for the purpose?—Yes, it is perfectly sufficient, if attended to.

137. What is the rate of interest upon the loan?—The rate of interest is four per cent.

138. Do you borrow of private parties?—Yes, of private parties, and have no difficulty in getting it. I ought to add also, that private parties always require an additional security; that some of the principal gentlemen in the county should lend their names in addition; which they never hesitate to do.

139. Is that a charge upon the land, or personal security?—It is a personal security. To my knowledge, I do not recollect any money borrowed for such purpose being under four per cent., though the current rate of interest is at present three-and-a-half per cent., and under that in some cases.

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140. Did you ever borrow any money from Government for those purposes?—Never.

141. Is the landlord assessed in Sutherland in a moiety of the 9*d.* in cases where it is merely for repairs, and not for making roads?—In both instances.

142. Is the three-pence in addition, that is collected from the landlord, for the ordinary current repairs of the road?—Both for repairs and the making of the roads.

143. I am assuming that there are no new roads made in the course of the year; is that charge of 4½*d.* and 3*d.* afterwards to be levied on them for the ordinary current repairs of the road?—Certainly; I ought to observe, that it is the landlord only who imposes the tax.

144. How are the repairs of the roads, which were made by the Commissioners, or at least by the grant given by the Commissioners—how are the repairs of those roads done?—The Commissioners have a general surveyor, who annually makes up an estimate of what the repairs of the Parliamentary roads within each county is likely to amount to. The annual grant of 5,000*l.* a year is now made by Government, with an alleviation of three-fourths, payable by the counties, one-fourth paid out of the 5,000*l.*, and three-fourths by the counties; and if the payment by the counties should exceed one penny in the pound on the rental assessed for the Income Tax in 1813 and 1814, the Commissioners pay one-half of such excess.

145. Is the 5,000*l.* found sufficient for the purpose?—The 5,000*l.* has been so well administered that it is not only found sufficient to keep the roads in repair with the sums assessed on the different counties, but an accumulation having taken place, the Commissioners have been enabled to make some very great improvements on the general line of highland road between Dunkeld and Inverness.

146. At their sole expense?—Yes, their sole expense. Of the 5,000*l.*, 1,066*l.* goes to Inverness-shire, 438*l.* to Ross, 222*l.* to Sutherland, and 115*l.* to Caithness, and lesser sums to the counties of Elgin, Nairn, Aberdeen and Argyle; the remainder is applicable to the expense of management and casualties, which latter are sometimes very serious.

147. Can you state the amount of the cost of the 350 miles of road made in Sutherland?—It is not easy to state what the whole amount of the cost of the 350 miles of road was, and for this reason, that in many instances where the poor tenants got in arrear, it was found better that they should pay the rent by work on the roads than call upon them to pay such arrears, care being taken that the roads made by the arrears should be convenient and useful to the persons making them; but I can state that the amount of money expended there under the Statute Labour Act, and by the Duke of Sutherland himself in one shape or another, amounted to near 60,000*l.*

148. Can you state the sum for the 200 miles of road in Caithness?—I am not sufficiently informed to enable me to state that.

149. The fact is, that whereas 94 miles of road were made by Government in Sutherland, 350 miles were made by private persons, and whereas 46 miles of road were made in Caithness, 200 miles of road were made at the expense of private individuals?—Yes, under their respective Statute Labour Acts; and in order to indemnify the proprietors of Caithness, they have taken care to erect turnpikes on all the roads so made.

150. Do you think a considerable portion of the roads made at the expense of private parties or of the counties would have been made if the main trunk, a moiety of the expense of which was subscribed by the public, had not been previously laid out?—I have no doubt, in the progress of improvement which has extended itself to the North of Scotland as well as elsewhere, that an improved system of road-making would have been adopted even without any assistance from the Parliamentary Commissioners; but of this I am perfectly satisfied, knowing the manner in which those additional roads have been made and the motives which influenced their being undertaken, that if the public had not come forward in the manner they did, we never should, certainly not now, nor for many years to come, have enjoyed the advantages of these collateral roads, made either by counties or by individuals; and I can state in confirmation of this opinion, that when I first became acquainted with the Highlands, the advantage of roads was so undervalued, that it was with great difficulty it was found possible to get the concurrence of some of the resident gentlemen to contribute towards their construction; but latterly, whenever a road has been made, the great difficulty has been to know how to comply with the wishes of the people in order to extend branch roads in every direction, to enable them to get the full advantage of that which has been made.

made. In consequence of this a remarkable difference has taken place in the whole habits of the people; in place of a great number of ponies being kept for the purpose of bringing in their fuel and getting in their harvest, carts are universally employed. It is quite clear, that unless roads are extended to all the different townships, the possession of the advantages to be derived from the main lines of communication will not be obtained, unless these minor roads are made, and I therefore have always considered the public money expended in the Highlands of Scotland has been done most judiciously, and has forwarded the improvement of that district by a great number of years indeed.

151. Is the investment, both public and individual, meeting with a reasonable return for the application of the capital?—In reply to that, I should mention a fact as to the state of the coast side of Sutherland in the year 1812, compared with what it is now. In 1812, on the occasion of an election for the county, the candidate had to ride to the place where he was to be elected, there being then no road by which he could go in a carriage. Understanding that the country was ill supplied with horse-provender, he made a great exertion to cross all the ferries, hoping when he got to Dunrobin Castle that he would have his wants supplied, but he found neither oats for his horse nor hay, and he was obliged to get some barley, upon which they were fed, and the next morning a boat had to be sent to the adjoining county of Ross to get some hay and some oats. The present condition of that district is, that there is now an abundant supply of hay, an annual exportation of oats; wheat is grown all over the district, and the system of farming pursued along the whole line of the coast, I will not hesitate to say, is now the best in the United Kingdom, on 31 farms, averaging from 80 to 360 arable acres.

152. Has the value of property in the country also greatly increased?—Yes, and of course the revenue has increased.

153. Can you ascertain, from any returns, whether there has been a considerable increase of revenue?—There is a greater consumption; the people are in a much more comfortable situation, better housed, better fed, better clothed; and I may say, the progress of cultivation in Caithness of late years is, perhaps, even more rapid than the cultivation on the coast side of Sutherland. Within my recollection, the women were employed in many instances to carry manure from the sea side to lay upon the lots. At present, there is not a person in that part of the county who has not a cart; in 1821, there was not a gig belonging to the county, in 1830 there were 41, which exceeds the number of farm carts that were in the county in 1821.

154. Has the public money been expended in the Highlands of Scotland entirely in the main lines of communication across the country?—In the county of Inverness, the extent of roads made by the Commissioners has exceeded those which have been made in any other county; and although, generally speaking, the outlay is confined to the main lines of road, they have been carried to some of the remote districts in the Western coast, which are, of course, of a more local nature.

155. Generally speaking, through the Highlands of Scotland, the outlay has been upon the main and principal lines of communication?—Generally speaking.

156. I allude to branch roads; at whose expense are the branch roads made?—Either under the statute labour, or, if not of sufficient importance to be so made, in some instances made by the landlords only, and in other instances made partly by the landlords and those people to be benefitted by them; all that is done, however, under private arrangement.

157. Did they ever receive any grants from Government for branch roads?—Not for branch roads, as such.

158. Do you recollect the amount laid out for the Caledonian Canal?—I cannot say the exact amount, but I believe it exceeded a million of money; but as to this, I beg to refer to the Twenty-ninth Report of the Caledonian Canal Commissioners. I should also like to state this circumstance, that in 1828, the number of carts on the coast side of Sutherland was 518, and in 1830 they increased to 844.

159. What is the nature of the tenure generally in that district?—The tacksmen, have all nineteen years' leases; the rest of the people are generally tenants at will, but they are never disturbed, except for reasons, and they look on their tenures as certain.

160. The arrangement being that part is paid by the landlord and part by the occupier, facilitates those improvements; they proceed more rapidly than if the entire was paid by the occupier?—I certainly think so; I should rather say, having had my attention extensively drawn to this subject, that I doubt very much, if I had

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to draw the Statute Labour Act for Sutherland over again, I would not recommend that the whole payment should be imposed on the landlord.

161. Leaving the landlord, of course, to impose the tax?—Yes, leaving the landlord to reimburse himself in his arrangement with the tenants.

162. Is there any single instance of any of the public roads in Scotland being made at the sole expense of Government, without assistance from the proprietors of the county?—Not to my knowledge.

163. Is the 5,000*l.* for the repairs limited to the roads made by Government?—The 5,000*l.* is limited to the roads made under the authority of the Parliamentary Commissioners; and what I ought to have stated before is, that after the Rebellion of 1745, there was a considerable extent of road made entirely at the expense of Government, which they used for military purposes; and in consequence of the 5,000*l.* being given for the repair of the Parliamentary roads, the Government cast upon the Commissioners and the counties the maintenance of those roads which had previously been entirely maintained at the expense of Government.

164. Did they contribute equally, the counties and Government, out of the 5,000*l.* to the repair of the military roads?—I think, that previous to the year 1814, the roads in Scotland which were known by the name of military roads, were entirely maintained at the expense of Government; on the 5,000*l.* being given to the Commissioners for the repair of Parliamentary roads, the Government withdrew giving any thing to the maintenance of the military roads, and the military roads were placed upon the same footing as the other Parliamentary roads, and they were to be maintained by the Commissioners in the proportion I formerly mentioned.

165. Can you tell us the expense of management?—I cannot say at the present moment; but it will be found in the Twentieth Report of the Commissioners for 1834.

166. There is a superintendent, whose quarters are at Inverness?—There is; who travels over the roads twice a year.

167. Are there inspectors?—Yes, there are inspectors in each county.

168. Do you know the amount of accumulation of saving expended by the Commissioners for improvements?—To the best of my recollection, the expense of the great improvement which we have just completed on the great line of road between Dunkeld and Inverness amounts to somewhere about 5,000*l.* It was an extremely dangerous pass between two mountains, and almost cut off the communication between the two places during the dark winter nights. In a dark night it was impossible to pass it in some places at such times: we have now made it a level excellent road, and shortened the distance a mile and a half, which will be attended with the greatest possible advantage.

169. How long has the 5,000*l.* been paid?—Since 1814.

170. Do you know the amount of accumulations upon it?—I should say the 5,000*l.* nearly exhausted the whole; but I beg to state this with hesitation, and to refer to the Commissioners' Reports in this and in the last Session of Parliament.

171. Are all the military roads kept up now?—Not all of them, some of them have been abandoned.

172. Superseded by better lines?—Yes, and abandoned by the counties not agreeing to pay their proportion of the three-fourths.

173. Were not the military roads made rather for the advantage of the communications of Government than as a commercial speculation?—Yes.

174. Is it compulsory in Scotland to levy money for the repairs of those roads?—No, it is not for those particular roads.

175. But it is for the other roads?—Yes, for the statute labour roads, and when they have adopted the military roads it becomes compulsory as to them also; but when the arrangement was made with the counties, it was left to the counties either to adopt the arrangement of keeping up those roads or abandoning them, and many of them are abandoned.

176. Do the inspectors look over the statute labour roads?—No.

177. How are they kept up?—That varies in each county. In the county of Sutherland we have a general surveyor for the whole county; in the county of Caithness, if I recollect right, the local trustees alone look after them.

178. Is there any difference in the manner in which they are kept in repair?—No, the repairs of both are equally good; of late years great attention has been paid to repairs of the roads in Scotland, and I may say, generally speaking, they are all kept in sufficient repair.

179. Is

179. Is there any superiority?—I should say there was not much.

180. Do you know the amount expended in public roads in Scotland?—I do not at the present moment.

181. Is there any difficulties experienced from the circumstance of those roads not being under the same control?—Not in the least. There is one point I ought to state; the district roads are not so wide in the more distant parts of the country as where a greater communication is required; they are not more than ten feet wide, with a passing place at the end of every furlong.

182. Were there materials at hand, generally speaking, in making the roads?—The materials all over the Highlands are remarkably convenient.

183. Can you state the nature of the materials?—In the greater part of the Highlands it is a sort of decomposed granite, or gneiss; in some districts there is a considerable quantity of limestone, but still there is no district entirely without the decomposed granite, which after a winter's frost gets extremely hard, making a smooth road, except where there is a great deal of cartage on the road, and there it is necessary to make it stronger by means of broken stones.

184. Is there any compensation given to the persons through whose land the roads are made?—It is the rule of the Commissioners to make no compensation for the land which they go through; all they do is to build up fences. Their opinion is, that in such a country, if they on the part of the public give them the benefit of having a good road, the advantage to the district is sufficient to repay the landlords for the land taken from them. In some instances, near Inverness, where the land is more valuable, by private subscription, or by some arrangement with the county, compensation is, I believe, made, with which the Commissioners, however, have nothing to do; the Commissioners have uniformly resisted any compensation, and in general the advantage of good roads is now so well estimated in the Highlands, that except in a few instances the occupiers cheerfully give up what is required for the construction of roads.

185. Have the Commissioners any compulsory power of obtaining portions of land for making roads?—There is a compulsory power; but for the reasons given, the Commissioners have rarely if ever acted on it.

186. Have they under the Statute Labour Act?—Yes; but I may say it is never enforced, inasmuch as the occupier generally accedes to the views of the trustees.

187. Where there is an unwillingness it gives way?—Yes; that has been generally the case as the advantage of roads is more thoroughly understood.

188. Is the increased value of the remaining land an ample compensation to the land-owners for what they give up for those purposes?—Undoubtedly it is in a country so situated.

189. Has the rent of the land been advanced considerably?—Very much; it is more by the creation of new rents than the raising the rent on the old lands; in some districts it is the creation of rent altogether.

190. Then not only there is a greater quantity of land cultivated, but the land previously in cultivation is better cultivated?—Yes; it is not the same sort of thing at all. Formerly it could hardly be called cultivation; whereas it is now some of the best cultivation in the kingdom.

191. Have not the roads made, rendered the farms more valuable in Scotland?—Very much.

192. Are not the buildings very much increased on the side of those roads; are there not more houses built?—In answer to the last question, I would say, that upon the coast side of Sutherland, when I first knew it, there was hardly any thing but black huts, with a cow and a pig living along with the family; and in 1828 there were 328 cottages built of stone, with chimneys. I ought to add, they had some assistance from the landlord, as the timber was given to them, but the whole of the work besides was done at the expense of the occupier; and in all parts of the Highlands I am acquainted with, and I see a large proportion of it every year, a new road is never made that I do not immediately see new improvements and new houses, and the greatest benefit following.

193. Do you attribute this increase of cottages solely to the roads being made, or to the encouragement given by the Duchess of Sutherland by the people being taken from the new farms, and the encouragement of the building of villages?—My observation extended to all the Highlands; it was not confined to Sutherland or the Sutherland estates; and I should say, if the roads were not made, it would be impossible to get the people to do what they have done.

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194. Do you consider the roads the cause or the effect?—The cause, certainly. My observation, I beg to repeat, is not limited to Sutherland, but if you go to the adjoining county of Caithness the same is apparent there on the side of every road made, and the same in Inverness-shire, and also in a remarkable degree in Ross-shire and Aberdeenshire; indeed Scotland presents innumerable instances of this fact from the one end of it to the other. It must be well known to every gentleman that until roads are made, cultivation on a great scale is impracticable; and as soon as such are constructed, improvements of every sort immediately arise.

195. Has the population much increased within the period you have mentioned?—In some districts it has increased, and in others it has not materially.

196. To what do you ascribe the difference?—Wherever there is a large fishing village, of course the population is increased in a great proportion, and faster than where there is none. I now speak of the north only.

197. Is there not a good deal of the country thrown into sheep-farms?—A large proportion of some parts of it.

198. What has been the mode adopted in getting the roads made?—The general mode has been, after the county surveyor has marked out the road, that advertisements have been circulated for the purpose of enabling persons to make a tender.

199. Is that so as to the repairs also?—The repairs were originally done also by contract, but latterly we have done it more economically, and kept the roads in better repair by stationing so many men on a certain extent of road, and then the county surveyor with the assistance of the local trustees, have seen that the roads are kept in the repair they ought to be.

200. How are those men paid?—By days' wages.

201. Are they constantly in employ?—Yes.

202. What is the general rate of wages for labour?—From about 1*s.* to 1*s.* 3*d.* and 1*s.* 6*d.* a day; some 2*s.*; carpenters 2*s.*, masons 2*s.* 6*d.*

203. State the general advantages that have arisen to Scotland from the making of these roads?—When I first became acquainted with the Highlands, the great proportion of the people, in place of being immediate tenants of the landlord, held of the different tacksmen. Since then almost every person occupying land, and I do not confine my observations to Sutherland alone, though principally to it, have become all immediate tenants to the landlord. They were extremely irregular in their habits, being poachers on the rivers and smugglers, and since then in Sutherland they have given up both, and have become most industrious workmen in every class of agricultural labour. It was necessary, at the period I mention, to get ploughmen from Elgin, and that side of the Moray Firth, and there was not a person who could build a stone wall, the ordinary mode of inclosing land in that country; but it is so much the reverse at the present moment, that almost every ploughman in the country is a native, and they are now the best builders of stone walls in the North, in consequence of which they are employed in all the adjoining counties. A great improvement has taken place also arising from the greater extension of the English language. When the children on the coast side formerly came out of school, though they were taught to read English in the school, they spoke nothing but the Gaelic language; now when they play after school hours on the coast side, they all speak English. Nothing has tended so much to this as the institution of Gaelic schools, which were founded with the object of preserving that language; but the fact is, the moment persons have acquired the facility of reading Gaelic, they find it of no use, and immediately leave it, and teach themselves English.

204. You say there were a kind of middle men when you first knew the country; how do you account for their being given up?—It was given up first of all from the feeling on the part of the landlord that it was his duty to have all persons on his estate holding immediately from himself, and from the change in the agriculture of the country, it was necessary that the tenant occupying the land should be freed from having his under tenants on the land, which were then parcelled in what we call lots.

205. Had the tacksmen leases?—They had all leases.

206. How were they got out?—There were tenants at will under the middle men, and paid their rents under circumstances of the most grievous nature.

207. Was it by an agreement between the tenant and the landlord that the middle men were got rid of?—At the termination of the lease the arrangement was always made to provide some situation for the lotters by the landlord, and then the farm was let to tacksmen, the lotters being otherwise provided for.

208. You

208. You got them removed to other places?—We placed them in other places; sometimes a large farm was cut up, and each person got a portion of arable land to maintain himself, and then they were allowed to possess for 19 years, without paying any rent whatever, portions of land they brought into cultivation, in addition to such portion of arable land.

209. Is there a covenant in the tacksmen's leases prohibiting them from underletting?—Strictly.

210. Do you find any difficulty in enforcing those covenants?—No. I should like to add, that in 1829, the whole of the north-west portion of Sutherland was without a road, and in 1830 the roads were begun to be made according to the Plan which I have delivered in, and we have kept a sort of account of the number of gigs and carts that pass at certain places, to see what effect the roads have had upon the intercourse of the country, and I found at one point, namely, the chain-boat across the Habradale, in the year 1831, which was the year the roads were fully opened, that the number of gigs that passed that point was 65; in the next year, 125; in 1833, 151; and in 1834, 189. The carts were for the same years 660, 594, 787 and 746; in a county where carts did not exist a few years before, at the Naver chain-boat, there were, in 1831, 102 gigs and 182 carts; in 1832, 109 gigs and 324 carts; in 1833, 69 gigs and 328 carts; in 1834, 124 gigs and 321 carts. Tongue Ferry, in 1831, 21 gigs and 41 carts; in 1832, 37 gigs and 53 carts; in 1833, 44 gigs and 85 carts; in 1834, 53 gigs and 84 carts.

211. Do you know how far the mail-coach communication is carried in that country?—The mail-coach communication was carried to Thurso, beyond Inverness, in 1819. Previous to that the post was conveyed by means of runners. I should remark, that it is now carried from Thurso along the north coast by means of individual subscriptions as far as Tongue, and that was carried into effect the very year the road was opened.

212. Is it a four-horse coach or a pair-horse coach?—A pair-horse coach to Thurso from Tain; from Thurso it is conveyed in an open double-bodied carriage and a pair of horses; the regular establishments of the mail extends to Tain, in Ross-shire.

213. Did these improvements lead to the establishment of any manufactories?—The county of Sutherland is not a county favourable to the establishment of manufactories; the great object in the north of Scotland for the improvement of the country is the extension of the fisheries, and it has led to the extension of the fisheries to a very great degree.

214. How far have turnpikes been carried into operation there, and with what effect?—On many of the roads through Inverness, Ross-shire and Caithness, made under the authority of the Parliamentary Commissioners, turnpikes have been erected, and also on the statute labour roads in the latter county.

215. What return have they made?—The Act whereby the roads are repaired by the Commissioners, enables them to erect turnpikes; so that they come in aid of the public grant and the assessment of the county. For their produce, I beg to refer the Committee to the Appendix to the Reports of the Parliamentary Commissioners.

216. Do they do more than merely keep the roads in repair?—In some instances, and not in others; near the great towns they do.

217. Have they any where repaid any of the primary cost?—No.

218. Do you consider them injurious to the agriculture and commerce of the country?—They have been so placed as rather to throw the tax upon the general traveller than on the local interests of the country.

219. Are they upon the general rate of toll, as a shilling for a pair of horses?—The tolls levied on the principal lines in the North are exceedingly high; I rather think they are double what you say.

220. Is there generally, travelling in that part of the country sufficient to raise a revenue?—In Inverness and Ross-shire certainly; but while I say they are so placed as to throw as small a tax as possible on the local interest, they must collect a considerable amount from the ordinary carriage of the country.

221. In your opinion, ought they to be continued?—In some districts, I should say certainly; in other districts I should say, on the contrary, it is a great impediment to the improvement of the country.

222. Do they pay for keeping the roads in repair?—In some instances they do; in other instances they are a general alleviation of the charge.

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223. Can you tell me the expense of the maintenance of the road in the general line of road, the roads you point out, per mile?—I cannot from recollection; if I looked at the Commissioners' Report I could inform you.

224. Could you tell me the proportions which the turnpike on any line of roads bears to the mileage?—Not from recollection. I think in the Report of 1834, you will find in the Appendix such an account.

225. Do you think the local interest would be more served by the removal or the continuance of the turnpikes?—For example, in the county of Sutherland, in conjunction with several gentlemen who have considerable estates there, we have come to the opinion that it would be a tax that would bear so heavy upon the tenantry of the country, that it would be a detriment; but I do not mean to say the time will not come when it would be a fit thing to put it on. Now, on the other side, in Caithness they think it more for their benefit to put on the turnpikes than pay the whole expenses as a tax on the land.

226. Have not most of these turnpikes been very recently erected?—Very recently; the roads have only been recently made.

227. I mean on the roads previously made in the North of Scotland?—On the great road leading from Dunkeld to Inverness, the tolls levied on that road are very considerable.

IN reference to a question put to me, as to whether all grants of public money in Scotland for the execution of public works in that country, were met by sums either assessed on the counties or contributed by individuals, I wish to add to the answer I then made, the following observation; that I find that there are several instances where public money has been from time to time advanced in aid of public works in Scotland, varying in the terms upon which the same has been advanced.

By the 49 Geo. 3. c. lxxxiii., for the Improvement of the Queensferry, which serves as the great means of communication between the North and South of Scotland, the public advanced the sum of 13,586*l.* 3*s.* 1½*d.* to meet the sum of 20,238*l.* 3*s.* 1½*d.* subscribed by individuals; and by the 54 Geo. 3. c. 138, the further sum of 10,000*l.* was advanced to complete the improvements at that place, on the condition of that sum being met by the sum of 10,000*l.* on the part of the trustees of the ferry.

By the 56 Geo. 3. c. lxxxiii., the 58 Geo. 3. c. 44, 59 Geo. 3. c. xc., and the 1 & 2 Geo. 4. c. xxvii. the sum of 50,000*l.* was put at the disposal of the Commissioners of Highland Roads and Bridges, for the improvement of the road between Carlisle and Glasgow, on condition of a similar sum being advanced by private parties.

By the 1 Geo. 4. c. lxxxiv. and 4 Geo. 4. c. 10, the Exchequer Bill Commissioners were authorized to advance to the Highland Road and Bridge Commissioners, Exchequer Bills to the amount of 51,475*l.* to construct certain leading roads in the counties of Lanark and Dumbarton, on condition that the persons interested in such roads should advance one-third of that sum.

This grant was made in order to employ the poor weavers of those districts who were out of work. The country through which these roads were made, as also through which the Carlisle and Glasgow road was made, being very mountainous and uninhabited, did not require the construction of roads of such dimensions and consequence, as were required to connect the great manufacturing districts of the West of Scotland with each other and with those in England.

The sum of 25,000*l.*, which had been advanced to the Forth and Clyde Canal out of the Annexed Estates having been repaid to the Government, the same was, by the 39 Geo. 3. c. lxxi., advanced to the Crinan Canal. By the 45 Geo. 3. c. 85, a further sum of 25,000*l.* was given; by the 51 Geo. 3. c. 117, the sum of 5,000*l.* was advanced; and by the 56 Geo. 3. c. 135, the sum of 19,400*l.* was added to those other grants, and the works were put under the management of the Caledonian Canal Commissioners.

A particular reference to these various statutes had better be had, in order that the particular objects of each grant, and the terms upon which they were agreed to, may be distinctly seen.

Mercurii, 1° die Aprilis, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *John Fox Burgoyne*, called, and Examined.

Colonel. *John F. Burgoyne.* 1 April 1835.

228. ARE you Chairman of the Board of Public Works in Ireland;—I am.

229. When was that Board constituted?—In 1831.

229-(1). Of how many is that Board composed?—Myself, as Chairman, and two Commissioners.

230. And a secretary?—Yes.

231. And how many clerks?—Three office clerks.

232. Have you been in the engineers?—Yes.

233. What are your military services as engineer?—Chiefly in the field.

234. And subsequently?—Subsequently at Chatham for six years, and three years at Portsmouth.

235. Your appointment to the Board of Public Works in Ireland was an appointment taking you from the Ordnance service?—It was.

236. Who are the other gentlemen that form the Board of Works?—Mr. Brooke Taylor Ottley, who came from the Army Account Office; and Mr. John Ratcliffe, who was formerly in the corps of engineers also.

237. Therefore the Board consisted of two gentlemen educated as military engineers, and one whose former practice had given him experience as to the public accounts, having been an examiner of the accounts rendered to Government?—Yes, precisely.

238. Without any reference to the qualifications of the individuals who now form the Board of Works, do you conceive, assuming the number to be properly fixed at three, that two practical engineers and a person conversant with accounts, gives a principle upon which the Board can be managed usefully and effectively?—I think it the best possible principle, and a great advantage to have persons conversant with works, and also to have one well conversant with accounts.

239. You do not mean to say that three is the best possible number?—Yes; fewer than three would add too much responsibility to the persons, and more than three might not work well together.

240. What was the former pursuit of the secretary?—He has been thirty years in the service of different Boards, having similar avocations. He was in the Fishery Board and the Board of Inland Navigation for many years; he commenced as secretary to the latter, and became subsequently a commissioner.

241. How many clerks are there?—Three clerks in the secretary's office.

242. What are the duties of those clerks?—Copying and registering all the proceedings, writing many letters from rough minutes, under direction of the secretary, after which they enter them and keep an account of all the proceedings.

243. I think you said there was an accountant also?—There is an accountant, who has two clerks; he had originally one, but he has been obliged to have another in consequence of the pressure of business in his office.

244. Have you any engineer attached?—We have one engineer and architect combined in the same person.

245. He is constantly employed by you?—Constantly.

246. What were the former pursuits of this engineer or architect?—He was formerly in the Ordnance Service, and clerk of the works in an extensive district at Portsmouth.

247. Were the duties he previously performed such as to give him in your judgment, habits of experience and knowledge fitted for his present situation?—I consider him the most able man for the situation I ever knew in my life.

248. What are his duties?—The whole of the engineers' and architects' business in Dublin, a general but less direct superintendence of various works in the country, and answering references and consultations on other points of sufficient importance.

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249. Was he appointed to the situation by Government, or by the commissioners from their past experience of his ability and knowledge?—He was appointed entirely at my recommendation, backed by the Marquis of Anglesey, who was Lord Lieutenant at the time, and Sir William Gosset, the under Secretary, who were both well acquainted with him previously.

250. Did you ever employ any other engineers?—Frequently.

251. How did you pay those other engineers?—We paid them according to their reputation and station in their profession. If it was for a considerable work, we employed a man of high reputation, and paid him accordingly.

252. Do you employ for that purpose the county surveyor?—Frequently.

253. Not always?—No.

254. By whom are those engineers paid you so employ?—When the employment is to investigate the propriety of making a loan or grant, the engineer's expenses are paid by the party who applies for the loan or grant; in other cases, they are paid out of the contingencies of the office.

255. You consider you have a right to the services of the surveyor, gratuitously, from his connexion as county surveyor, or as to county works?—Yes, on county works.

256. You have a right to demand his services, gratuitously, for county works?—I should put it in a different way; I should say, we cannot give him any allowance, though we are willing to do so; as for instance, in the only case in which we must necessarily employ the county engineers, namely, that of the mail coach roads; where they are in a neglected state, the post-master general, by an Act of last year, applies to us to have them put into repair under the county surveyor, as it is county work, and the expenses paid by the county; we consider that we have no authority to give him any extra allowance, at the same time we think he ought to have it.

257. The county surveyor you do not consider under your control?—Not at all; except in that special case.

258. When you employ him for county business, do you throw more labour upon him than he otherwise would have?—The only case I could call county business was, that of the mail coach roads, which made it imperative to employ him in his own county.

259. Suppose the grand jury present for a road, and that you lend money under the authority of the Act to the grand jury, would it not be considered necessary to employ the county surveyor for that purpose?—Decidedly not; because as we require an investigation, to be satisfied that the plan is correct, we should employ another surveyor, very likely a county surveyor from an adjoining county, in that case we should pay him out of the fund provided by the party for defraying the expenses of the investigation.

260. Then the county surveyor is paid in consequence of the advance being made by you; if the road was made by the Government grant he would not receive it?—We require somebody to investigate the propriety of the plan.

261. You do not entirely rely on the opinion of the county surveyor?—Not generally of the individual who drew up the plan, it would be no check if we did.

262. Do you not think the utmost evil would arise between you and the county, if you employed other than your own servant in the application of the monies that would be required, one man might be laying out money on one part of the road, and another on another part, and do you not think there would be a collision if two individuals were employed by two different parties in the repair of the same communication?—By the provisions of the Government grants and loans, such a case cannot arise.

263. Under the post office arrangement you have spoken of?—I think it would be very injurious; it is much better to employ the county surveyor.

264. Do you employ the county surveyor some times for other purposes?—We do.

265. Do you think it interferes with his public duties?—When we employ the county surveyor, we always ask whether he has time for it or not.

266. From your knowledge of the duties of the county surveyor, do you think that they have time;—At some periods they have; at others, they are overwhelmed with business.

267. Are they sometimes more actively employed, necessarily, in county business than at others?—Very much so; I understand at particular periods they cannot do the business.

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268. If they are to be the sole judges whether they have time or not, might not the public interest be sacrificed when they are performing the duties for you?—We know pretty well the periods when they are so occupied, and we have never employed them in lengthened or distant operations.

269. Who fixes the sum paid to the engineers that are called upon to inspect public works, in case of applications to you?—We arrange it with the engineers themselves.

270. Would you have any objection to lay before the Committee a return of all payments that have been made to engineers named by the Board, for the purpose of superintending works of which parties have made application to you for grants or loans?—I should not have the slightest objection, but I am not prepared with it at this moment.

271. Is it the first Board of general public works ever constituted in Ireland?—I believe it is. There was a Board of works at Dublin, but that was purely for the Dublin-civil buildings, the castle, park and so on.

272. Were not the duties of that Board annexed to your Board?—Yes.

273. What were the other boards of which the duties were annexed to your board?—There were five in all; namely, the Board of Works in Dublin, the Board of Inland Navigation, the Board for lending money from the Consolidated Fund, the Commissioners of Kingstown Harbour, and the Commissioners of Dunmore Harbour; the fisheries were included in the inland navigation; they were transferred to the Board of Inland Navigation previously.

274–5. The duty of the Board for lending money out of the consolidated fund was under the provisions of the Act of 57th Geo. 3?—I believe it was.

276. With respect to the Board of Works in Dublin, of what were they constituted previously?—I think there were five commissioners.

277. Can you tell us what was the expense of those Boards?—I cannot tell the expense of the individual Boards.

278. Can you tell us the number of commissioners of which the Board of inland navigation consisted?—There were five.

279. What were the number of the Board for issuing money out of the consolidated fund?—There were a large number, I think, but they were unpaid.

280. Can you state to the Committee how many commissioners of the different Boards now consolidated there were altogether?—There were 33, but the greater part of them unpaid; for instance, Kingstown harbour had 15 all unpaid.

281. Out of the whole 33 how many were there unpaid?—There were 26, I believe, not paid.

282. What was the amount of the salaries of the seven paid?—About 3,400*l.*

283. Can you state to the Committee the actual expense of the present Board of works?—About 5,500*l.*

284. Can you state to the Committee the expense of the establishment of the different Boards now consolidated?—Nearly 10,000*l.*

285. Can you state to the Committee the amounts of money expended by the Board of inland navigation?—I cannot say; latterly it was small.

286. How was any principal expenditure by them applied?—There was a fund of 500,000*l.* voted by Parliament for inland navigations at the time of the Union placed under their management.

287. Was that a grant?—It was.

288. Do you know how it was applied to the Public Works?—It was expended on all the leading navigations in the kingdom; the Grand Canal had a large portion, and the Royal Canal.

289. Was it applied in improving the navigation of any of the rivers?—Some of it was applied to the Barrow, some on the Shannon; and to the port of Dublin also a large sum.

290. You said that the fisheries were transferred to this Board previously?—Yes, to the Board of inland navigation.

291. What do you conceive to be the defects in the working of the former Boards?—The former Boards, I believe, were found to be defective; inasmuch as they had not work equal to their establishments, and they were distinct Boards; and it was thought very justly that there would be a great advantage in uniting the labours regarding all Public Works under one department.

292. Are there other advantages besides economy of management?—A great advantage arises from the consolidation of means at command of universal application. Suppose a work is in hand in one county, and an engineer and establish-

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ment employed upon it, some little inquiry may be required regarding another object in the same county, by making use of the means, as hand, time and expense are saved; thus, in various ways, the means provided for one object may be made applicable to another with great advantage.

293. The advantage does not alone arise from economy in the difference of expense on the establishment, but in the increase of efficiency?—Yes; besides that we gain more experience, in proportion to the extent of operations, both as to persons and to modes of working.

294. And the work is sooner done?—Yes, and better.

295. If no further loan should be made through the medium of the Board, would not your position be something like the position of the old Board of inland navigation?—It would not; we have so many duties under us, independent of the working of these loans.

296. Your business certainly would be contracted for want of loans?—It would.

297. Was it found under the administration of those former Boards, that they clashed one with the other in carrying into effect the Public Works?—I am not aware that they clashed one with the other; but they had not the advantage of making use of the means of the one in furtherance of the works carried on by the other.

298. Is the performance of the duties in which the Board is at present engaged so great as to prevent its expenditure of 500,000*l.* more?—No; we could take any amount of duty.

299. Without any increase in the Board?—Yes, I think the Board equal to a great deal more.

300. The present number of the Board is sufficient for a more extended expenditure?—Yes, the Board of Commissioners.

301. Do you think it necessary for the public good, that being charged with more work the Board should be increased, or do you think it sufficient at present?—With regard to the Commissioners it is quite large enough; we should want a larger establishment of clerks and other officers.

302. Do you find the engineering department of this Board more efficient than the engineering department of the former Board for making loans?—They had no engineering department.

303. Then who did their work?—They employed any one they thought proper, any one they approved of.

304. Was there any previous examination of engineers such as exists at present by the Board of Works?—There has been no examinations except for the situation of county surveyor, as required by the late Grand Jury Act.

305. I want to know particularly whether the commissioners receive in any way any emoluments except their salaries from the local parties that apply?—None whatever; when we travel on duty we charge our actual expenses.

306. You alluded to an Act of Parliament passed in the 57 Geo. 3, by which monies were lent from the Consolidated Fund, to what amount, can you state to the Committee?—500,000*l.*

307. By whom were those loans managed?—By a Board of unpaid Commissioners, composed of eminent mercantile men of Dublin.

308. Was any part of the money lent to individuals as well as to public bodies?—Yes.

309. Upon what terms?—That I cannot state; I believe the interest was chiefly at 4 per cent.; some was lent for working collieries.

310. Was any lent for the purposes of agriculture?—I do not recollect any for the purposes of agriculture.

311. For drainage?—I cannot recollect any.

312. Is it not one of your duties to see to the repayment of the money advanced by that Board?—It is.

313. Have they been repaid, and to what extent?—You will find that in the account which we send in to Parliament every year.

314. Have they been paid according to the terms of the loan?—Some of them have not been paid at all, where the securities were insufficient; the others were paid rather irregularly when we first took up the business, but it has improved very much.

315. Does that arise from the insufficiency of the original security, this non-payment?—It does.

316. Is the deficit considerable?—Very large.

317. What

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317. What is the amount?—I should like to refer to the account; there is about 180,000*l.* still unpaid.

318. Do you expect to get any large portion of that?—No, a very small part, if any.

319. Is a large portion of the sum due by canals?—Yes, due by canals.

320. By the Grand and Royal Canals?—By the Grand Canal; the Royal Canal does not owe any part of it.

321. Is some of the 180,000*l.* due from individuals?—Some of it is.

322. Do you expect payment of that?—15,000*l.* is due by one individual, who pays nothing; the security was apparently very good, but there are great difficulties connected with it, and the recovery of any part will be costly.

323. Do I understand, with the exception of that single individual failure and the canals, that the whole will be fairly paid?—Besides them, there are two turnpike trusts which have failed in repaying loans to the amount of near 13,000*l.*, the Cork Wide Street Commissioners about 17,000*l.*, and the Youghal Bridge 11,000*l.*; there may be some failures in a few others, the repayments of which are not yet due.

324. Do you think, under the present system of granting money upon loans as laid down in the Act constituting the Board, that a similar result cannot again occur in Ireland, and that the money granted in future will be received back again according to the terms of the loan?—It cannot again occur to any very great extent; in some few partial cases it might.

325. Can such things ever occur under the existing constitution of the Board?—It cannot upon a similar scale.

326. Would the precaution necessary to be taken by the present commissioners prevent the recurrence of such a loss?—I should hope so, except in an accidental case, such as cannot be foreseen, and probably to a small amount.

327. The monies have been paid to the Consolidated Fund?—Yes, they are in the course of repayment now.

328. Without loss to the public?—Yes, except in the case of the failure of the security.

329. I am speaking of the monies that have been lent by you in loans, are they in the course of repayment without loss?—Yes, except in the case of Ardglass.

330. What was the amount of that?—Six thousand pounds.

331. What was the amount of the money placed at the disposal of the Board under the Act of 1831?—Five hundred thousand pounds for loans, and 50,000*l.* for grants.

332. How much of that 500,000*l.* have you lent already?—We have lent, or are under engagements to the amount of 494,000*l.*

333. Do you mean to include in that the 100,000*l.* lent to the Ecclesiastical Commissioners?—Yes; being appropriated for that purpose, it is no longer available for others.

334. In point of fact, during the three years during which the Board has been in operation, only 394,000*l.* has been sanctioned for the employment of the poor in Public Works?—That amount is not all sanctioned; I include in it some loans that have been before the Board, and acquiesced in, and consequently as appropriated.

335. Can you tell us how much is sanctioned, drawing a distinction between that sanctioned, and that in a state of progress?—Three hundred and fifty-one thousand seven hundred and seventy pounds has been sanctioned by the Treasury, including 46,000*l.* for the Ecclesiastical Commissioners.

336. How much has been actually expended?—The amount of Exchequer Bills issued is 195,250*l.*

337. Making the average of the actual expenditure on Public Works, in each year, of about 65,000*l.* a year?—Yes, but there are grants besides.

338. How much of those monies have been actually received by the parties?—One hundred and ninety-five thousand pounds.

339. And the sum of 350,000*l.* sanctioned?—Yes.

340. And the sum of 494,000*l.* contracted for and allotted?—Yes.

341. How much of those monies so lent, or engaged to be lent by you, have been lent to individuals, and not to public bodies?—A very small amount; I should say not more than 12,000*l.* or 14,000*l.*

342. And the rest was for public companies or bodies?—For public bodies or corporations.

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343. What proportion have the grand jury taken?—About 150,000*l.* have been lent on security of Grand Jury Presentments.

344. Can you state to the Committee the nature of the works of those public bodies?—They are harbours, railways, navigations; of the latter, the Limerick navigation is one, the Newry is another, and the Boyne a third; there are three navigations.

345. Is that the Limerick bridge and dock?—No, the Limerick Navigation Company.

346. Then, in point of fact, you have encouraged by the loans only three small navigations in Ireland?—Only those three.

347. The rest were harbours and railways?—Yes.

348. Can you state where those harbours are situated?—Ardglass, Limerick, Galway, Drogheda, Ballyshannon, Claddagh and Belfast.

349. And the railroads?—The railroads are Dublin and Kingstown, and a small railway near Belfast, to bring limestone from Cavehill.

350. Has the Board the power of selection, or do they consider themselves bound to grant loans wherever the proper security is offered?—We have no power of selection; we can only take into consideration the propriety of making any loans for which application is made.

351. Have you it in your power to lend monies in those districts where you think the works would be more useful, if they ask for it?—We have only to consider the propriety of the project laid before us.

352. And you must always have sufficient security, according to the Act?—Yes.

353. Has it ever occurred to you that you were unwillingly obliged to refuse a loan of money under those circumstances, seeing that it might be usefully employed?—I should like very much to agree to many applications made, if I could conceive the Government would give the money.

354. That is, if proper security was offered, it would come within the meaning of the Act?—Yes.

355. You have advanced money for the purpose of encouraging only three navigations; what number of navigations have you been applied to to assist, and of such character that you would recommend the expenditure of public money upon them?—There were none, as regards the security, that we could recommend.

356. With reference to public utility?—I think there are a great many of great public utility.

357. I believe application was made to you, on behalf of the Royal Canal Company, to cut a canal from the Shannon to the town of Roscommon?—There was.

358. I believe you thought yourselves bound to refuse the application?—Yes.

359. Upon the ground that the security was not sufficient, according to the terms of the Act?—Precisely.

360. Not from any disapprobation of the work?—Not at all.

361. Would you have disapproved if the security was sufficient?—No.

362. Did not the work appear to be a useful work, and advantageous to the country?—Decidedly.

363. Do you recollect the security offered; have you any trace of it in your mind?—I do not remember it; I remember the nature of it.

364. Was it an objection to the nature or the amount?—To the amount.

365. Do you recollect the amount asked for?—I do not precisely remember; I believe it was 13,000*l.*

366. Do you conceive that 13,000*l.* would have finished the work?—I believe the sum required, whatever it was, would have been adequate, but the security was insufficient.

367. What did you require of them to show as a security?—Eight per cent. from the very commencement, or nine per cent. after five years for the completion of the work.

368. Would they have been able to give security, if instead of requiring eight per cent. you merely required six per cent?—No, I think we considered the security totally insufficient in that case, it was very deficient according to the terms required by our Act.

369. Did your considering it was insufficient arise from the result of the extension of the navigation of Ballinasloe?—Chiefly from that; the line to Ballinasloe appeared to be so very favourable that we thought Roscommon was not likely to be better.

370. Do

370. Do you not think the Ballinasloe navigation would be much improved if this was carried on to Loughrea and Galway?—On general principles the extension of the canal is beneficial, but I am not quite sure that it would be so here; it would require a deal of lockage, and the expense of this canal would be very heavy in consequence of the great rise to overcome.

371. What other lateral canals from the River Shannon do you think worthy of the consideration of Parliament?—I cannot at this moment tell; I know the country is extremely favourable to lateral canals, and there are many rivers that might be made navigable.

372. Do you know the Carnadoe River?—I know it; I have heard it is a favourable one.

373. Are you aware of a channel of ten miles there passing through the centre of the richest land in Ireland?—I know there is a very favourable line there by the Carnadoe river.

374. You state there was one case in which you were reluctlantly obliged to refuse a canal?—Yes; when I state reluctantly, it is with reference to the tempting nature of the work, it seemed so favourable, but I am not quite sure that that was a work which peculiarly claims an advance of the public money.

375. Have you had any application for a canal to Nenagh?—We have.

376. Is it your opinion that such canal would be of great advantage to the neighbourhood of Nenagh?—It would be an expensive canal in proportion to its length.

377. Are there not extensive flour mills in the neighbourhood of Nenagh?—There are, but that is one of the difficulties in making the canal, that it would interfere with those mills.

378. Would not the existence of such a canal afford great facilities for the shipment of flour to Dublin?—It would undoubtedly.

379. I believe there were some persons to whom you were obliged to refuse loans under the Act?—Yes, on the same ground.

380. There was the line of canal between Loch Corrib and Galway?—Yes.

381. You had made an advance to the Commissioners of the Harbour of Galway?—Yes.

382. To the amount of 17,000*l.*?—Yes, 17,000*l.*

383. The security offered for it was the harbour dues?—It was.

384. Do you recollect the annual amount of the harbour dues?—Twelve hundred pounds a year.

385. I think according to the Act you could not lend more than 17,000*l.* on that security?—No.

386. Do you think on the erection of the dock and quay that the harbour dues would be increased?—I think they would to a certain degree.

387. A part of the undertaking was making a canal between Loch Corrib and the sea?—It was.

388. It was a short distance?—Very short, not half a mile.

389. Would not the making of that canal open a very extensive agricultural country to the sea?—It would.

390. I believe the extent of Loch Corrib is 30 miles in length?—It is long.

391. Is the navigation of Loch Corrib constantly frequented?—It is not much used and not much known; but I have no doubt it might be made very useful.

392. Do you not think the navigation would be much increased by means of this canal?—I think it would be.

393. Besides furnishing means to farmers from the country sending their corn, would it not also afford the means of bringing their manure from the sea?—I think it would; it would diminish the expense of the carriage.

394. Do you recollect the additional amount asked for making this canal?—I think it was 12,000*l.*

395. And you did not think yourselves justified according to the Act in making that grant?—I was not satisfied that 12,000*l.* would be sufficient.

396. What sum would be sufficient?—We did not go into the investigation, but we found some items of the expenses were omitted.

397. Could you state to the Committee the probable amount of expenses?—No, I cannot; I may state generally with regard to local improvements that the capabilities of Ireland are so very great that unless a new principle is adopted altogether we could not advance money for all improvements under this Act, it would require very large funds.

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398. If the rate of interest was materially lessened would it not enable you to embrace a much larger range of useful Public Works than you consider yourself at present at liberty to undertake?—Not much larger; the refusal has not been usually for a trifling consideration, but, in our minds, to a large amount.

399. Instead of a return of eight per cent., suppose you took it at a return of five per cent.?—That would let several works in, no doubt, that are now rejected.

400. You have stated certain canals for which you have advanced the public money; are there not twenty or thirty different works of the same nature in Ireland capable of improvement?—Yes; the same extent of improvement may be pointed out in fifty other places in Ireland.

401. Without an enormous advance of the public money of the country, would it not be quite hopeless to satisfy all parties in these Public Works?—I think it would; but I ought to add, that I am persuaded it would be very good policy to make large advances for some descriptions of work.

402. Do you not consider, under this Act, that it is necessary at present to look more to the security offered rather as a beneficial investment on the part of the Government than the general utility of the proposed work?—I do not imagine any part of the loans are a beneficial investment to Government, or that they are meant to be.

403. Is not the money repaid with certain interest?—It is.

403*. Is it not above the interest at which it is borrowed?—It is; there is a small advantage intended to defray the expense.

404. Have you sanctioned any work on security on which you could not have obtained the money in the public market?—I apprehend the loans we have made could not have been had elsewhere.

405. Do you consider the outlay under this Act has tended to encourage the industry and improve the condition of the people?—Yes, decidedly.

406. Do you consider the increase of the water carriage in Ireland, as an agricultural country, would materially tend to improve their condition?—Certainly.

407. You are aware you have advanced but 29,000 *l.* out of the 500,000 *l.* as loans for this purpose?—Yes.

408. You are aware no grant whatever has been made for this purpose?—That object is not within the provision for grants.

409. Applications have been made to you by the inhabitants of Ennis on various occasions, for the purpose of obtaining the extension of the navigation from Fergus as far as Ennis, which is the metropolis of the county of Clare?—There have.

410. Is it not your opinion, that if a sufficient security could have been shown, that would have been a work of extreme utility to the town of Ennis in particular, and the surrounding country in general?—It would have been a most useful work; but I think the town of Clare would have benefited more than the town of Ennis. When I was asked the question as to the propriety of making grants for navigations, my impression was, that it referred to the general lines on which there are tolls for the benefit of private individuals and companies, and with regard to whom it would appear unreasonable to expend the public money for their profit.

411. That objection would not apply to those cases in which private parties derive no profit from the result of the expenditure?—Not at all.

412. If that principle has governed your mind, how does it happen that the Board of which you are at the head, have lent 75,000 *l.* to a rail-road company from Kingstown to Dublin?—Because we considered we had very good show of security, and which has been fully realized by the result, and because the parties themselves expended nearly twice as much out of their own resources.

413. The interest being secured by the work, you would have no objection to lend money for the extension of the royal and grand canal?—Quite the contrary; and I think in the grand canal in particular, great improvements might be made by the alteration of the level.

414. With benefit to the community?—Yes.

415. Do you not think the extension of the grand canal beyond the Shannon would be of very great utility?—Extensions of either canal would be useful.

416. I wish to ask you, whether that 75,000 *l.* which you advanced for the Kingstown railway, might not have been more beneficially applied in other parts of the kingdom, provided you had not been so restricted with respect to the security?—I think, as to that loan of 75,000 *l.*, that it is the most advantageous we have made since we have commenced operations in the promotion and encouragement of an expenditure of a large amount of private capital on a public work.

417. You

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417. You have been asked, with reference to different works in different parts of Ireland; do you mean to select those as public works on which the public money could be most advantageously laid out in Ireland, or not; particular individual cases have been drawn to your attention, do you mean to select those as cases out of all other cases in Ireland in which the public money could be most advantageously laid out?—Certainly not. I think the roads through uncultivated districts of most importance.

418. What is the next in importance?—The next is for great leading lines of navigation like the Shannon, or any great object that would open the resources generally of the country, and are not within the capability of private individuals, or of the public bodies of the country.

419. What is the next?—The general line of canals.

420. In that answer have you the erection of harbours on the sea coast in your contemplation?—I think the small fishing piers have been of great advantage, those small harbours erected by Mr. Nimmo were exceedingly beneficial to the lower class of people, and in that respect they are deserving of great encouragement.

421. The general lines of road across the country affording a facility of communication by branch roads by private individuals, would in your judgment be a most beneficial application of the public money?—I think so; and I think the building of small harbours is another. I listened with great attention to the detail which Mr. Loch gave of the benefits derived to the Highlands of Scotland from the roads carried on in that country; and I could not help reflecting that every advantage which he stated had accrued to that country would be experienced in a much greater degree in Ireland. In the first place looking at the general lines of communication throughout the country the roads in Scotland only led to remote and distant places of little consequence. In Ireland they usually form an improved means of communication between one great town and another; another circumstance peculiar to Ireland which makes them particularly beneficial is, that the uncultivated districts are capable of great fertility, more so than in almost any other country, and it only requires the application of the ingredients which may be found in the neighbourhood in all directions, to render them very productive, those ingredients are lime, limestone, gravel, sea weed, marl and coral sand, and they are all so dispersed over the country, that any person inclined to think that Providence was interested in such details, would say it was a most beautiful specimen of its workings. The operation of those roads is to introduce those materials, and at the same time to afford an outlet for the produce; there is another peculiar advantage in Ireland in the construction of the roads, that whereas the existence of these uncultivated wastes in Scotland and in other countries may be considered only as a negative loss of so much land, in Ireland they are a source of positive evil, affording points of refuge for all the disturbers of the peace in the country, and of the persons, who either from misery or excitement, are inclined to do mischief. By the formation of these roads a resource is given them for the exercise of useful industry, of which I must say they seem very ready to avail themselves. I think on all these considerations the formation of roads through uncultivated districts in Ireland would be more beneficial than in any other country in the world.

422. What are the principal lines of communication which you think it would be most desirable to make, with reference to the unfolding the resources of the country?—I cannot specify the particular lines; but the districts generally of Galway, Mayo and Clare, and I believe parts of Donegal; Mayo in particular.

423. Have you taken into consideration the districts adjoining the counties of Kerry, Limerick and Cork?—All these counties also are very susceptible of improvement in that way.

424. What sum of money do you conceive it would require to construct those general lines of communication?—I cannot say precisely what sum, but you might expend from 5,000*l.* to 100,000*l.* and the more you expended the more beneficial it would be.

425. Do you mean to state that 100,000*l.* is the maximum you think necessary in constructing those general lines of communication?—I will not say that; I think you might lay out a great deal more with great advantage to the country.

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426. Would it be two millions, five millions or twenty millions?—It is not possible, nor does it appear necessary to define the precise amount, any degree of expenditure large or small would make a complete work of itself, and gain a complete object; the limit therefore must be measured by what you will give.

427. To whatever extent you go there will still be claims behind?—I dare say there will for a long time, some justifiable and some otherwise, but still it would be a beneficial investment of the public money.

428. In what way would the public be benefited?—By a very great increase of revenue from the additional prosperity of the country; a point that seems to be sometimes doubted, but I think it would be clear to any person's mind by putting the converse of the case: imagine a country in a tolerable state of prosperity well-peopled, and to be all of a sudden thrown into a state of rapid decline, the people driven to poverty and the country laid waste; anybody would consider that to be a very great loss to the revenue and to the country, and probably they would not hesitate to make very large grants to stop such mischief, consequently the benefit derived from the improvements admits of the same argument of gain to the revenue and to the country.

429. What would you require from the tenants where these roads would pass, what proportion of the work to be paid for by them, and what by the public?—I do not think they are able to pay any part of it.

430. In Scotland they always contributed one-half?—Yes, they do; but then they meet with an immediate return for the outlay; in Ireland they do not.

431. Notwithstanding that, you are of opinion that a large sum of money would be most beneficially laid out in making roads and forming lines of communication in Ireland?—Decidedly.

432. And with great advantage to the public?—Yes.

433. I wish to ask you whether there were not some lines of communication laid out by Mr. Nimmo and Mr. Killaly?—There were.

434. Have they all been completed?—Mr. Killaly's has, and Mr. Nimmo's are now in a state of being completed.

435. Have you resources for that purpose to complete Mr. Nimmo's?—For the leading lines we have, by the grant of last year.

436. Will that be sufficient for Mr. Nimmo's?—Yes; sufficient for his leading branches.

437. Do you know the south line at Connemara?—Yes, I do.

438. Will your present resources enable you to complete that line of road?—No; certainly not.

439. But you think that a line of road that ought to be made?—Yes.

440. Is it within your knowledge that there is a great deal of illicit distillation in that part of the country?—Not within my knowledge; but I believe in most of the remote districts without roads there is a great deal of illicit distillation.

441. Is that line of Connemara to which your attention has been drawn, one of the lines most important to be first completed?—It would be one that I should select for early consideration.

442. There is another road in the county of Mayo?—Yes; that is one very useful and much wanted. I think that the district of Erris wants roads more than any part of Ireland.

443. There was an Act passed last year to enable the Postmaster-general to repair roads in Ireland,—have such measures been taken by the Postmaster-general?—Yes.

444. Usefully?—Very usefully; we are repairing roads in many parts of the kingdom under that Act; the necessity arose from those portions of mail-coach roads having been neglected by the counties, for causes of which I am not aware.

Veneris, 3° die Aprilis, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *John Fox Burgoyne*, called in; and further Examined.

Colonel *John F. Burgoyne.*

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445. YOU alluded in your examination the other day to an Act passed last year, allowing the Postmaster General to repair the mail roads, and many repairs were so done; can you tell us in what parts of the country they were performed?—I cannot state at once from memory, but I should say in more than half the counties.

446. Did you conceive that Act to be necessary?—It was particularly necessary at that moment, in consequence of the confusion occasioned by going from the old to the new grand jury law; there was a cessation in the operations, from not knowing how the present Grand Jury Act would work, in consequence of which some of the roads got into such a state as to be absolutely dangerous and considerably to retard the mails.

447. In your opinion, would it be useful to make that Act permanent?—That Act was created by the necessity, arising from the neglect of the counties in providing for those roads; it would be better if the counties themselves would make the proper provision.

448. You know there was a previous Act in 1808, giving the postmasters the power to perform the work if the counties neglected it?—I am not aware that there was a previous Act to that effect.

449. Not for repairs, but for the construction of roads?—There is no Act making it imperative.

450. But giving the counties the power of doing it in the first instance, and if they did not, the postmaster-general to do it?—The postmaster-general has the power of causing surveys to be made of roads which he may think desirable; the surveys are then submitted to the grand juries, with a recommendation that they should be made, but it is discretionary with the grand jury to adopt them or not.

451. In your opinion is that sufficient?—I think some occasional compulsory power on the grand jury would be very desirable for forwarding public improvements in roads. I know of cases where very useful lines of road would be carried through a country, but for want of the power to pass through some very small portion of an individual county, which fancies its interests opposed to it, the whole measure has been defeated. There are cases where a shilling presentment has been refused in order to defeat the measure, and perhaps a very useful measure for the country. In such instances it would seem very desirable to have some powers to correct the evil. I have known instances of two counties presenting for a bridge, and if the plans of the two engineers employed had been followed, the two halves of the bridge would have been of different constructions and at different parts of the river.

452. If you give a compulsory power of that sort, ought not Government to contribute a part towards the expense?—I do not understand how the Government is concerned in the question.

453. I think you said that Government ought to lay out large sums of money in making roads in Ireland?—I think so decidedly.

454. Why not in that case?—Because this is merely an omission on the part of counties for common purposes and common occasions, and if a contribution from Government was to be the necessary result, the consequence would be, that all roads would be purposely neglected in order to obtain such contribution.

455. Where would you apply the Government money?—In opening very extensive uncultivated districts; I would provide one main thoroughfare of communication at the expense of Government, and for opening less extensive districts I would give the moiety grants as at present; for those occasions they work very well.

456. Do you include great tracts of bog in your improvable districts?—Yes, bogs and mountain land.

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457. Would it not be right to compel the landlord to contribute?—I think not in the cases of those very extensive districts I referred to; they have no sufficient interest in it; the great benefit derived from opening those lines of roads would be to the lower classes for many years, and it would be only a distant prospective advantage that the landlord would have in them.

458. Would not the people themselves be willing to contribute?—The people who would derive the principal benefit have no means of doing so, the poor people.

459. There is their labour?—You cannot have people's gratuitous labour who have nothing else to live on.

460. Did you ever hear of one-half of the estimated rate per perch being given to the people who executed the work, in consideration of the local advantage they derived from it?—I have; and in such a case the road might be constructed at a moderate expense, very beneficially to the country.

461. Is this generally applicable to the state of the country with reference to the people's contribution?—I think in some cases it is made the subject of oppression by taking advantage of their necessities to get out of them their labour at a low rate.

462. Can you state to the Committee, of the grant of 50,000*l.* placed at your disposal, how much has been advanced for the making of roads and bridges?—Thirty thousand pounds.

463. Sanctioned or laid out?—Actually authorised and sanctioned.

464. And works embarked in?—Yes.

465. I see by the return in your Report of 1834, that 27,595*l.* had been sanctioned for grants up to that period, so that during the last year only about 2,000*l.* has been obtained in grants for the Public Works in Ireland?—A very small portion has been granted in the last year.

466. How can you account for that?—The parties have not been willing to come forward with their half; I believe that to be the principal reason.

467. If another 50,000*l.* was placed at your disposal, upon the same terms of contributing one-half by the applicants, do you think that you would not have applications for that amount?—On the same terms I think it would be a long time before we should have sufficient applications, but I should hope that the terms would be allowed to embrace more objects.

468. Were many of the applications that have been made, made by grand juries?—Nearly the whole by grand juries, and a small portion in aid of funds provided by individuals.

469. What alteration would you recommend to be made in the terms of making these grants?—I think it is of so much consequence to encourage the advance of private capital for Public Works in Ireland, that I would be induced to make a grant to an equal amount for any work of real public utility, in conjunction with any party who would subscribe the same, without expecting any direct tolls or profits from the undertaking.

470. Are those not the terms now as to roads and bridges?—Only with regard to roads and bridges; and in certain situations I would give this advantage to useful Public Works of any description and in any situation.

471. With respect to roads and bridges, would you make any alteration in the present terms of the grants?—Not as to grand juries; to voluntary subscriptions I would give the advantage above-mentioned.

472. Besides roads and bridges, you are allowed under this Act to grant a moiety for the erection of small harbours, piers and quays?—We are.

473. Have many applications been made to you for that purpose?—Only one, and that was a small sum for a small pier in Cork harbour.

474. Did you comply with that demand?—We did, and the work was executed.

475. Has it been found beneficial to the country?—We have not had a Report since immediately after the work was completed, but the other moiety having been contributed by an individual who lived on the spot, I have no doubt it was very beneficial.

476. Are you aware the grand juries have not the power of presenting for the erection of harbours, piers and quays?—I know that they have not the power, and I regret that they have not.

477. Would you recommend such a power to be given to grand juries?—Decidedly, upon several accounts.

478. If

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478. If that power was given to grand juries, would you not limit the district within which the sum is to be levied?—I think the Members of the Committee are better judges than myself on that point. I referred, in my previous answer, to *small* piers; I had not in contemplation large harbours: there are remote districts where there is a very great want of the accommodation of small piers and shelter for small craft; and when the occupiers of land are charged with the grand jury cess for roads and other county works, from which they receive no benefit whatever, contributing regularly to the levy, without one sixpence ever being laid out in the district.

479. And perhaps the situation of the roads is at a distance of several miles?—Precisely; and the grand jury have not the power, even if willing, to contribute towards the work of equal public utility which would be beneficial to them.

480. Do you think there is any objection to trusting the grand jury with the power it at present possesses, in some other cases, of raising the money required for the building of such piers on particular baronies which derive the most benefit from the erection?—I think it would be a very desirable arrangement.

481. Do you think it ought to be submitted to a special session of the barony in the same manner as other local taxes?—Yes.

482. Would you not give the power as well to the barony as to the county?—Yes.

483. The power here is confined to small harbours, piers and quays?—It is.

484. And you are restrained from making any grant except for small harbours, piers and quays?—Yes, we cannot exceed a grant of 1,000 *l.* towards such works.

485. Would you not extend the power of making these grants?—I would, if the means were unlimited; but the means being limited, I think the nature of the work must come into consideration.

486. You have referred to the case where private parties would derive no immediate pecuniary profit in the nature of interest or return from the grant you propose to allow; in the case of the Grand Canal, who have profits, you would not give grants to them?—I would, if the disposable means were very great; but as they are not for local improvements and to parties deriving profits, I would give loans; otherwise, without prodigious means, the door would be opened to such extensive claims that the Government would not have the power of complying with them all.

487. Would not that effectually be secured by calling for one-half in the way of contribution every where?—Decidedly.

488. An individual contributing one-half?—I think that the Government might always give one-half; wherever an individual contributes the other half without looking to any direct profit from the undertaking, there would be no great danger by doing so of being overburdened with applications, and the gross amount would of course be limited.

489. Would you extend that to the neighbourhood of large towns and populous districts?—I would. I know of cases where, if in aid of grand jury presentments a private subscription to the amount of 200 *l.* or 300 *l.* could have been doubled, a very useful road or bridge would have been constructed.

490. Have not the Commissioners, in your opinion, a certain power to select those works with respect to which applications are made which they consider best deserving their consideration, or are they compelled to advance money on loan or grant, provided satisfactory security is given?—The Commissioners have no power of selection.

491. Would it not in your judgment be very desirable that they should have the power of selecting those works which they think most desirable?—I think it would be in cases of grants very desirable to give the Commissioners the power of offering to the consideration of Government those measures which they might think most advantageous and worthy of Government support.

492. Out of the numerous applications, have you the power of selecting those which you think the most deserving of encouragement?—No; we must take them on their individual merits; if a work of utility, we cannot reject it because we know of others more useful.

493. Will you state, as explicitly and as fully as you can, the description of works which you consider particularly deserving of encouragement from the public funds?—I think, the works most deserving of encouragement at the public expense, are the roads through extensive uncultivated districts, and opening the great line of the Shannon. I think those works are worthy of execution at the entire expense of Government, because no other parties have sufficient interest in them, or means

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to undertake them. The benefits would be so diffused over the whole body of the community, that the State alone would receive decided and immediate returns from them. I think local improvements of all descriptions, and undertakings by companies of shareholders, are very worthy of encouragement also; but as the claims for such works would be very numerous, it is not to be expected that Government could do more than promote them by way of loan; at the same time the more advantageous the terms on which those loans could be made the better; but in all cases I would particularly encourage the outlay of private capital, by giving the boon I have before mentioned in my former answers to every advance made by individuals by a free grant in cases of contribution, without looking for direct profit, and by increased advantages in the terms of the loans to such parties as advanced a very large portion of the expense, even though they did contemplate profits.

494. Is it your opinion that the landlords ought to be called upon to contribute any and what part of the expenditure for general works, which would afford increased facilities of communication, and thereby increase the value of their own estates?—I think they ought to make advances in proportion to the benefits that would accrue to their estates, but as those benefits in many cases are remote, and property generally, I believe, is tied up and under embarrassment in Ireland, it is more difficult perhaps in that country than in any other to obtain contributions from the landed proprietors.

495. Would you mention to the Committee any particular case in which great benefit has arisen to the community, from any expenditure by way of grant upon roads in Ireland?—In every case it is quite notorious to persons who are acquainted with the country through which these roads have been carried, that surprising effects of improvement are to be witnessed; instances occur frequently that bring them very forcibly to our notice. There are two mentioned in the Third Report of the Commissioners of Public Works of this year. One is the opening of an extensive district bordering on the counties of Clare and Galway, of 300 or 400 square miles, at an expense to the public not exceeding 10,000*l.*; in consequence of which improvement, lands that were before a desert, and even the source of a great deal of mischief to the country from harbouring bad characters, have become now subjects of speculation for agricultural improvements; the other in a report from one of our road superintendents in the county of Tipperary. It was mentioned incidentally that during the last year 63,000 barrels of lime were introduced by means of these Government roads into the uncultivated wastes, a quantity sufficient for the reclaiming of 1,200 acres of land. There was another instance, in the district of Connemara, of a road completed very recently, and being in a remote district, was made of gravel, but the traffic was at once so very great upon it for the conveyance of fish and manure, as it leads from the sea coast, that we have been forced to add a coating of broken stone, and to alter the terms of the contract we had entered into for the repairs; the expense in consequence of the extent of business so much exceeding what could possibly have been anticipated when the poor man who undertook the contract entered upon it. All those roads are Government roads.

496. How are the Government roads, as you call them, repaired now?—They are repaired under the management of the Board, by funds provided by Government, and subsequently repaid by grand juries, under compulsory presentments.

497. Would you recommend any alteration to be made in that respect?—No, I think it to be a very good arrangement.

498. Are you not aware that in Scotland, Government contributes 5,000*l.* annually to the repairs of the roads?—I am not aware of that; I should prefer the Government contributing to the construction of the roads rather than the repairs; the repairs to remain charged upon the county.

499. On whom is the amount of those repairs levied; is it upon the landlord or the occupier?—It is from the county at large.

500. Would you not recommend it to be levied upon the landlord, either in whole or in part?—I really have never considered the subject of how the levies are made; and I am not a competent judge of it.

501. You recommended the making of grants where there was no direct benefit to be taken, do you refer to tolls?—Yes, to tolls.

502. Does it appear to you that in any case where toll is taken, Government might not usefully make a grant, particularly where they derived, in the case of piers or docks, custom dues?—I think it would open a door to many demands, more

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more than the Government could possibly comply with, otherwise it would be very beneficial.

503. Your primary object would be these roads, and till the roads were completed, you would not spend any money upon the other works?—I think that the roads and the Shannon would create as great an expense as probably the Legislature would be willing to afford.

504. I believe, under the present Act, you have no power of making any grants for the improvement of the navigation of rivers in Ireland?—We have none.

505. Would you recommend such power to be given?—It would be so difficult to define the precise cases as to which grants should be made, that it might be better to acknowledge the principle of contributing to them, and allow them to be brought specifically before Parliament every year.

506. Would you extend to grand juries the same power which you have proposed to give them in the case of fisheries, of raising money for the purpose of improving the navigation of rivers, or of making canals and railways?—Not by general assessment, but I would allow them to sanction the levies voluntarily and fairly laid by the baronies or districts immediately interested.

507. Would you give them the same facility in making water communications that you would as to land?—Yes, to that extent; it is a system, I believe, pursued beneficially in the United States.

508. You would not confine that to the Shannon, but you would extend it to all water communication?—Yes.

509. Would you also extend it to canals?—I would extend it to all public works and improvements.

510. Are you aware of how many miles of post roads you have repaired in the last year?—I cannot state from memory.

511. I see in your Report for this year, that for the maintenance and repair of 92 miles of road in the county of Clare the sum of 2,268*l.* has been expended, making an average of about 24*l.* per mile; are you not aware that the ordinary roads in Clare are maintained at rather less than one-half that sum?—I am quite sure they ought to be maintained at less than half the sum, because they are generally in a shocking state of repair, while our roads are in an excellent state; there is great traffic upon our roads, and the more so in consequence of the badness of the others, people go frequently considerably out of their way to get on our roads; there is enormous traffic upon them, and the materials are very expensive or very bad: the superintendent we have there is very trustworthy and able, and I fully believe conducts the business remarkably well. It is sound policy where you have a road, to keep it in good order, at whatever expense it may be to the country.

512. Are you, from your local knowledge, enabled to state that some main lines of communication in the county of Clare are not maintained in excellent repair at the rate of 8*d.* per perch, about one-half of the charge for your 92 miles of road?—I believe some portions of our roads may cost less than 4*d.* in the county of Clare, and others may cost half a crown; those roads which cost so much have an immense traffic upon them and are in a bad country for material. I do not believe there is any want of economy in the management of those roads.

513. Are you aware that the main line between Ennis and Limerick is maintained at a considerable less cost?—I am not aware of it. With regard to Government roads, we have a considerable extent of them dispersed all over Ireland, and wherever there is a small portion in any one district, that will be somewhat expensive on account of the establishment.

514. In order to account for the cost of your roads being greater than the main line of road through the county of Clare, which is only 8*d.* a perch, you stated that you considered your roads to be in very good order and the other roads in very bad order; do you know of any main line of road in Clare out of order?—I referred to the roads in the immediate neighbourhood of ours, I do not know from my own personal observation their state, but I have it from the report of the local Inspectors and those who are sent to control the local Inspectors, and I have such confidence in their reports that I would vouch for their being correct.

515. Have those persons who are sent by you to inspect the roads any thing to do with the expenditure of money on the roads?—The resident Superintendents have the management of the expenditure, but not the engineer who makes the occasional inspections.

516. Are you not aware, that within the last three years considerable portions of the roads in the county of Clare under the care of the Board of Works have been

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in a state which has given rise to complaints?—Some few years ago there were complaints.

517. Have you any knowledge that in the county of Roscommon the roads were even in such a state as to occasion complaints from the grand jury?—I know they were reported to be in bad order, but I doubt its being the case.

518. You are aware the grand jury did it?—Yes; I know they have, they have opposed the management in the hands of the Board from the very commencement.

519. Are you not aware that the grand jury of the county of Clare refused for two or three successive years to sanction a presentment for the roads, upon the ground that they were so much more expensive than other roads in the same county?—I believe they objected to the expense, but I think what they grounded their judgment upon was erroneous, which was the expense of maintenance of roads in other parts, without considering the peculiar circumstances under which those roads were placed. Some years ago there was a degree of mismanagement on the Clare roads, and the superintendent was dismissed from his situation; during the period he was in office there probably were some grounds of complaint, but not recently; in a multiplicity of roads and works that are to be managed all over the kingdom, it is to be expected that some errors will be committed occasionally.

520. Do you think a central system of management is likely to be more expensive and more liable to inefficiency than a well constituted local control and expenditure?—I think a well constituted local system of management under a central board of control would be the best system.

521. Are you aware that the grand jury for the county of Roscommon absolutely refused to present a sum of money expended under the direction of the Board, upon the ground of the roads not being in order, and of the money not having been expended?—I believe they did upon that ground; but I am satisfied that the road was in good order at the time, and that the money had absolutely been expended.

522. Why did you consider the road to be in good order?—Because it was reported to be so by our principal engineer, who was sent expressly to investigate it, and he said the road generally was in good order, but there were many little defects in detail which he recommended to be improved, as he does on all other occasions. I should state that this road is under peculiar circumstances. It is in extent 11 miles under our charge, and in different portions intersected by portions of county roads; that is, patches of two or three miles, and then a bit of county road, then a patch for two or three miles more, and then another bit of county road. I know that portions of the county road are in bad order, much worse than any part which belongs to our Board, and that gives the impression that our road is in such a bad state.

523. Are you of opinion generally that the roads under the management of your Board are both efficiently and economically managed?—I think where we have a sufficient quantity of road in one district to allow of the employment of an efficient superintendent, they are very well managed; but where there is but a small piece of road to be managed in a remote part of the country, the expense not admitting of an able superintendent there may be some mismanagement.

524. You have been asked to compare the efficiency and economy of a Central Board and a well-constituted Local Board; is it your opinion that you could establish throughout the country at a moderate expense, or without any expense to the public, those well-constituted Local Boards?—I am not aware of any system under which such an arrangement could be effected.

525. Do you think the superintendence of the local authorities, the grand juries or any other persons in Ireland would constitute a well-established Local Board for that purpose and efficiently?—I expect that great improvement will be made in the management of the roads by the appointment of county surveyors; by supporting them in their authority and arrangements the counties will be able to manage their roads well.

526. What are the number of miles of general lines of roads of great and pressing importance which you think desirable to be immediately made, and what would be an approximation to the expense?—I should think at a rough guess, that 200 miles would not be saying too much.

527. What would be the probable expense?—The probable expense might be 120,000*l.*, about 600*l.* a mile perhaps.

528. And is this the whole extent of the great lines of communication which you would contemplate making out of the public funds?—It would go beyond it.

529. How

529. How much beyond?—I have not made a correct calculation; it would require some researches with reference to that particular object. I gave too precise an answer when I said 200 miles; there is at least 100 miles in Galway and Mayo alone that might be made with very good effect.

530. Can you furnish the Committee with a list of the works for which applications for loans and grants have been made, and the amount of money required?—I can procure it, as far as formal applications have been made, but I doubt whether that would give the precise information wished for; we have many inquiries, and much correspondence regarding applications that are not entered in the application book, when the result ends in the parties abandoning their intention on finding they cannot get the aid they require.

531. Could you furnish a list of the works you think more particularly deserving of immediate attention, and the probable cost of those works?—I could make out a rough calculation after I return to Ireland.

532. Could you do it without difficulty?—Yes, if allowed a little time, a month or two.

533. You are aware of an Act being passed last Session respecting county bridges, that is bridges situated between two counties?—Yes, I am.

534. A power is thereby given of charging not only the county immediately adjoining, but the counties benefited by the erection of such bridges?—Precisely.

535. With respect to the power you would give grand juries as to the navigation of rivers, would you extend that principle also to those cases?—In the Act for county bridges there are some compulsory provisions which I think it would be hardly reasonable to put on contributions for navigation; it should be entirely voluntary on the part of the counties.

536. Have you considered the case of the navigation of part of the river being improved by a county or counties, and the other counties through which the river passes refusing to improve the navigation of the remainder of the river?—I think if the navigation be a heavy expense, it would not be reasonable to make it compulsory on the county, at the same time I would give power to prevent difficulties being placed in the way of a great improvement by parties who would have to contribute but a small proportion of the cost.

537. What powers would you give for that purpose?—It requires some consideration.

538. Would it not, for instance, be very hard, supposing one county had laid out a large sum in the last year in making a great road, and the adjoining county laid out nothing, and in the following year that county had chosen to lay out a small sum on the navigation; that the first county when it was burdened with a heavy debt already incurred should be called upon and be compelled to contribute to the navigation of the river?—It would seem to be a great hardship; the difficulty I feel in cases of navigation is, that it is a hard thing to make a county generally contribute to a navigation, from which, perhaps, but a small part of the county would receive a benefit; the case of roads is different, they are of absolute necessity, and of more general application.

539. Upon what principle would you apportion the assessment which might be necessary to defray the expense of improving the whole navigation of the Shannon upon the counties particularly benefited, and through which it passes?—I would not on any principle: I do not think it a good principle to put it upon the counties; I am against it.

540. How would you defray the expenses?—By the public.

541. Would you levy any tolls upon the shipping and merchandize taking advantage of the river?—I would most undoubtedly, both for the sake of raising the revenue, which they could reasonably pay, and also to retain a power of regulation and control.

542. If the navigation of the Upper Shannon, which is now under your care, were materially improved, do you not think that the tolls upon it would be much more considerable than they are at present?—They would, no doubt; but they would not by any means pay for the expense of the undertaking.

543. Can you suggest any scheme by which when one party proposes to make a part of a general line of communication as far as it passes through that county, that an adjoining county could be compelled to continue such line through its territory?—My principle is, that it should be done with regard to roads, but not with regard to navigation. With regard to roads, the only way it could be done is by a com-

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misssion appointed by Government of Government officers and gentlemen of a different part of the country would perhaps be most satisfactory.

544. Can you mention any instance within your own knowledge where such a provision as has been now suggested to you would be most desirable?—I can mention an instance where a road has been defeated for want of such a power. The Blesington turnpike trust has power to go to Carlow by a line which would be very advantageous to the country; but to carry it into execution it is necessary to pass through a small portion of the county of Kildare, whose grand jury have constantly refused to allow it, though only one shilling presentment was asked for; the consequence is, that a very improved communication from Dublin to Waterford, saving seven miles, is in a great measure defeated. There is another case where the county of Mayo has refused to carry on a great leading line of road, that would be very advantageous to the country in general, and which is already perfected up to the frontiers of that county.

545. Will you have the goodness to furnish the Committee with a detail of the cost of the superintendence upon those roads which are under your care?—I will procure it.

546. Are you aware that it is in evidence before this Committee that above 1,000 miles of road are kept up, under the Commissioners of Highland Roads, at an expenditure of superintendence which is limited to the appointment of one superintendent at a salary of 250*l.*, and seven inspectors, at 100*l.* a year each?—No, I am not aware of it.

547. Do you conceive that the system of superintendence proportionate to the number of miles under your care, is equally economical?—The superintendence under our Board at present ought to be expensive, on account of the great separation of the different works. I do not think you will find it expensive where the roads are somewhat concentrated, as in the counties of Kerry, Limerick, Tipperary, and Clare, nor in Galway and Mayo.

548. Does not the centralization of the powers afford you the means of directing your attention to the great and principal works of the country, instead of your money being frittered away in works of mere local and inferior importance?—I think so; but to understand the circumstances of these roads requires some explanation. They were made at the Government expense; and, in consequence of the mismanagement in some county roads in Ireland, it was thought, that as the Government incurred the expense of construction, they might stipulate to be allowed to undertake the keeping of the roads in repair, to prevent their being neglected. It is on that account only that the management is in the Board.

549. Are you of opinion that the conditions upon which the loans are at present advanced are of such severity that money could be obtained elsewhere for the proposed works upon the same conditions; and are you of opinion that those conditions require to be relaxed, and if so, in what particulars, and to what extent?—I have reason to believe that money could not be obtained elsewhere for any of the purposes for which our Board have made advances, upon terms that the parties would think equally favorable; otherwise they would not subject themselves to the control and interference to which they are liable in taking advances from us. There is the case of the Dublin and Kingstown Railway, which is now paying so well, that the shares, after two or three months' working, are at 30 per cent. premium. Hearing a report that the Company were likely to borrow money elsewhere to repay the loan they had obtained from us, I made inquiries, and was informed, that they have no idea of the kind, as they could not in any way improve themselves by doing so. The terms upon which the loans are made might be relaxed, as far as regards the rate of interest demanded.

550. To what rate of interest would you reduce it with respect to public bodies or individuals?—I would reduce it to the rate at which Government procures the money.

551. Can you state what rate that is?—The Exchequer Bills carry an interest of 2*d.* a day per cent., a fraction more than three per cent. per annum, and they are now at a premium.

552. There is a sinking fund required from public bodies; what is the rate of that sinking fund?—It is that the loans shall be paid off within a period never exceeding 25 years.

553. That is four per cent.?—It is four per cent. from the commencement, or five per cent. if the first repayment is deferred for five years.

554. You have the power to approve of the deferring the operation of the sinking

ing fund?—There is a power, with the approbation of the Treasury, for deferring it to any extent; but it is presumed it must be upon some good reason given.

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555. When the loan is first borrowed, you must be satisfied that it is able to bear the interest to be paid, and the sinking fund of four per cent?—Yes.

556. Otherwise you cannot give the loan?—No.

557. In your opinion, would it not be advisable to relax the terms in respect of payment by means of a sinking fund?—Looking at repayment at all, one can hardly conceive that it would be right to lengthen the period in the first instance beyond 25 years; it appears to be a very long period, admitting the principle that it ought to be repaid at all.

558. Then the only relaxation you would make, would be in the rate of interest?—In the rate of interest, if it is to be considered a loan positively to be repaid. There is another arrangement which has been recommended that would be beneficial in certain cases. At present the repayments are at four or five per cent. principal, and four per cent. interest; the consequence is, they are extremely heavy at the commencement, and are gradually in a state of reduction until the final settlement. It is thought by some parties that it would be more advantageous if they were allowed to distribute an equal amount of the payments through the whole period, by taking a medium, say six and a half per cent; thus instead of commencing with eight and nine per cent. and finishing with four, to pay six and a half per cent. throughout, so as to spread it equally over the whole of the twenty-five years.

559. Is that your opinion?—Where the parties think it advantageous, I would give them that advantage.

560. As well to public bodies as individuals?—Yes.

Lunæ, 6° die Aprilis, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *John Fox Burgoyne*, called in; and further Examined.

561. HAS the money lent by you to public bodies for Public Works been laid out by them, or under your direction?—Entirely by them, except in the case of the Limerick dock.

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562. Would you recommend any alteration to be made in that respect?—I think where Government contributes the whole of the expense, the Government should have the charge of the execution of the work, but where the parties subscribe it, I think it might reasonably be left to themselves.

563. Do you mean that Government should have the charge of the works where they take a mortgage on the tolls if they advance the whole of the money?—I do, if they advance the whole of the money. Even where parties give a mortgage of tolls, they may be much inclined to increase the amount of the expenditure, but when they subscribe for a given portion of the funds, they feel an interest in economising.

564. Do you think that this recommendation of yours should be retrospective with respect to loans you have made, or merely prospective?—Making it retrospective would be in some measure a breach of faith with the parties who have already entered into agreements.

565. Have you now an extensive superintendence over those works?—We have an extensive control over them.

566. Do you ever pay the money until you are satisfied that the work is effectively completed?—The money is paid by instalments, and upon the issue of each instalment, or as often as is judged necessary, we have an inspection by one of our engineers, to ascertain that the amount is due for work properly executed.

567. Are the accounts of the works subject to your audit?—They are not.

568. Do you not think it is very desirable that they should be brought under your view?—The works are generally under our control; if we find a given proportion done and properly executed, we are sensible the money must be due to that amount.

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569. Are those contracts entered into with your consent, or without it?—We usually require to have the inspection of the contract before it is entered into.

570. Have you the power of compelling the parties to submit to that inspection?—Yes, the mortgage deeds usually stipulate for such extent of control.

571. Are the parties applying for public loans obliged to submit their works to general competition?—They usually submit their plan of proceeding to the opinion of the Board, and our practice has been to recommend open contracts and public competition.

572. Has that been the practice on all occasions?—Not on all occasions, but it is usually done, and not deviated from unless on account of what we consider good reasons.

573. Are you of opinion, that the monies advanced by you for Public Works have been of great benefit to the public?—I am satisfied they have been of very great benefit.

574. Do you speak with reference to the limited amount expended under your direction?—As far as has been hitherto carried into effect.

575. The money so lent by you, you have every reasonable expectation of being repaid, have you not?—I think they will be nearly all repaid.

576. The annual expenditure which has arisen out of your operations has amounted to about 65,000*l.* a year upon an average, do you not think that sum might be trebled or quadrupled with very great advantage to the country?—I do, but the limited extent of issue has not arisen from any want of funds, because we have always till the present moment had sufficient to answer all the demands which have been approved of.

577. How do you account for there not being a greater amount?—I do not know how to account for it; 65,000*l.* may have been the average issues, but loans for works now in progress to a larger amount have been sanctioned.

578. Do you not think, if a further sum of money was placed at your disposal, that further demands would be made upon you for useful works?—Yes, upon the same ratio that is going on.

579. Do you not think that greater facilities in procuring the money might be afforded to parties from these Parliamentary grants?—I have already pointed out, in a previous answer, a few cases where I think the terms might be relaxed in making loans and particular grants that would no doubt be beneficial to the country, and open a door to further applications for loans and grants than have hitherto been made.

580. Looking at the general interests of the country, which are you inclined to prefer, a loan at a very moderate rate of interest, or a grant; looking at both the donor and receiver, is it not more for the interest of the country to lend it at the lowest possible rate of interest?—I think too many advantages cannot be given to the promotion of Public Works in Ireland generally, and I think that grants might be made for them in that country to a very great extent, for the benefit of the empire in general.

581. Specify the cases in which you think the terms should be relaxed on which the grants should be made?—I have already answered that.

582. Are public bodies in their applications to you much embarrassed in the investigation and showing their title?—I believe there is a great difficulty experienced in cases of landed security.

583. That is as to individuals?—Yes.

584. I am speaking as to public bodies only?—I think since our last regulations the security has been cleared of a great deal of legal difficulty.

585. Are they not obliged to incur considerable expense in making out specifications and plans to be laid before you?—Certainly, though not more than they ought. In general we find the plans deficient, the parties seldom go to a greater extent, or even so far in that respect as they ought to do.

586. Does any plan occur to you whereby the expense might be saved and better plans be given?—On some occasions parties desirous of making applications have had communication with our Board before making those plans, and have requested our opinion upon the manner of making them and upon the engineer to be employed. Having given such opinion and feeling confidence in the persons we have recommended, there is usually then a considerable saving in the expense of further investigation.

587. With respect to loans to individuals for the purpose of draining and improving lands you think the rate of interest should be reduced, and do you not think

think the time of repayment should also be enlarged?—The provision for loans in such cases contemplates a security upon the land itself to be improved, and requires that the Board should be satisfied that that land will be improved to the value of at least 10 per cent. per annum, and it is upon this principle therefore that the period of repayment has been restricted to 10 years; but altogether the security upon unimproved lands appears to be very inefficient without some collateral engagement.

588. Are you in the habit of considering the land to be improved as a sufficient security for the advance on the loan?—We have never been required to do so as yet; I should not think it sufficient, there are so many inducements for wild speculation; if we were to take that as the only security, a party might take a great extent of bog land at a nominal rent and speculate with our money; if it failed the loss would be to Government, if it succeeded the profit would be to themselves.

589. Are you not therefore of opinion that great benefit would arise to the country if facilities were offered to landed proprietors by loans of money to enable them to drain and improve their lands, and to what extent?—I think there is great risk in lending upon the security of unimproved lands.

590. But taking their own security, would it not be beneficial?—Decidedly.

591. Is there any means by which you can protect yourselves by advancing only a certain portion, the individual being responsible for the remainder?—I think that would be the best possible security, if the individual would advance a portion of the expense, and only require a portion from Government.

592. What sort of security would you require in addition to the personal security, or a security by way of conveyance of the land itself?—Any thing that is considered as available property.

593. Do you not find persons extremely reluctant to give such collateral security who would be willing to surrender the land itself as a security, and at the same time advance a portion of their own capital upon it?—We have not had any case of that kind; there would be a difficulty in correcting the expenditure on such works; you cannot define them; it is impossible to say in improving lands after a certain expenditure, that so much money has been laid out, therefore it is a departure from the principle on which we usually make loans, which is as for specific works that can be defined, and which we can examine and ascertain that the expenditure has been properly applied.

594. What is the difficulty of defining it?—The improvement of lands is usually performed by laying down manure and other operations, the extent of which cannot be judged of after the execution.

595. Would not that difficulty be removed by leaving the Board to lay out the money?—I do not think the Board would be competent to lay out the money for such purposes, it depends so much upon general farming considerations, the markets and various other agricultural details, that a public board would be very incompetent to regulate with effect. If money is to be advanced for the improvement of land, it should be to the parties interested, and entirely upon the faith of the security without any attempt to control the expenditure, in the manner loans are made to manufactories or other objects of that kind.

596. Suppose a large tract of bog belonging to different proprietors, and those proprietors should combine, and should advance a portion of the capital required for reclaiming the bog, do you think there is any objection to your advancing the other portion, provided the recovering and reclaiming the land was placed under the superintendence of a steward of your own appointment?—There would be no objection to our controlling any specific work like a road or canal, removing obstructions, in the course of a river, or opening some great general line of drain; but I think, for the common operations of the reclaiming and the improvement of land, we could not undertake the charge beneficially.

597. Are you not aware of an Act of Parliament passed in 1831, called an Act for removing the difficulties in the drainage of lands?—I am aware of the Act; it is called Mr. More O'Ferrall's Act.

598. To your knowledge has it at all been acted upon?—I believe in no instance. I think if there had been an instance, it would have come to the knowledge of the Board of Works.

599. Do you recollect the powers that that Act gave?—Generally.

600. To what cause do you attribute its not being brought into operation?—I really do not know to what cause. Mr. O'Ferrall himself commenced acting upon it for the improvement of one of his own bogs, but I believe has not as yet persevered.

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601. Might not some of the powers of that Act be usefully given to your Board?—I cannot understand how it would come into operation under our Board in any way.

602. Would it not be useful to your Board, upon the application of a certain number of proprietors of adjoining land on each side of the river, to remove obstructions in the river, that you should have these powers?—I do not think it would; the powers being given to the proprietors is a better arrangement.

603. Are you not aware that on the banks of the Fergus and the Shannon there are extensive tracts of mudland at present covered at high tide, but which when reclaimed from the sea, have proved to be land of the most fertile description? would you see any objection to the entrusting the Board with a power, upon application by the proprietors, of embanking those lands, wherever they were satisfied such improvements would yield a very large return for the capital expended, charging the landlord with the capital so advanced by the Board?—I would prefer doing it by loan to the parties themselves.

604. Are you not aware that at present great difficulty arises in an undertaking of this kind, from the impossibility of inducing individuals to unite in advancing their own capital, or in making application for a loan which, under the condition of the Act, their estates are respectively liable as security?—I think it would be a great difficulty to throw on a public Board to undertake to do what the proprietors themselves were unwilling to enter on.

605. Might there not be difficulties in the way of settlement?—I think such difficulties should be removed by Act of Parliament.

606. Then I understand in general, that you approve of such objects of embanking the tracts of land alluded to?—I do.

607. An embankment might be a principal and specific object?—It might.

608. If the erection of a large bog drain, with a view to reclaim land, could be rendered equally specific, would you not think that, a fair subject for applying the funds entrusted to the Board?—I should.

609. Has there not been considerable difficulty in making out a title by individuals to the Board?—I am not aware of any difficulties, but I believe that a proper and efficient mortgage on landed security must necessarily be expensive.

610. Has any mode occurred to you to lessen the expense, and the difficulties which occur in that respect?—No; it has not occurred to myself, but I have heard it mentioned that other modes might be suggested.

611. What are those modes?—One was, to make such loans the first charge on the estate.

612. Would you approve of that?—I know there are many who object to it, and many persons who advocate it.

613. What is your opinion?—My own opinion is, that it would be reasonable, because if there are grounds to suppose that the estate generally would be benefited by the operation, I cannot understand how any party could suffer by such a power.

614. In that case would not all difficulties as to the title be removed?—I imagine they would.

615. Would not an expenditure of that kind be liable to the same imputation which you brought upon the expenditure in the former case, of being in the nature of a speculation, which might possibly fail, and which possibly would leave the posterior creditors in a worse condition than they were before?—It might have that effect certainly, and I imagine that would be an objection to it; but there would be a check against an improvident speculation in the Report of the unprejudiced surveyor employed by the Board.

616. You stated there were other modes thought of, do you recollect what they were?—There was one of reducing the fees on searches; they are very expensive, and being payable to Government, it might be possible to dispense with them, as has been done with regard to stamps.

617. With reference to the reclamation of waste lands, have you thought of any specific measures which would tend to encourage such reclamation?—I am not aware of any general measure, except of making roads and navigations and other works of that kind, which tend very much to encourage the improvement of lands in their neighbourhood.

618. Do you think it desirable to entrust grand juries with the power of reclamation for the purpose of employing the poor tracts of land under certain conditions and in very favourable circumstances?—It might be very useful to employ a system

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of that kind, even at the expense of the risk of not meeting with a fully remunerating return, inasmuch as it would afford employment to the people, who are in a state of destitution from want of labour.

619. You think that something of the nature of the poor colonies in Holland might be introduced, subject to the control of Government?—Yes, I think it might.

620. In your opinion, would not that be more beneficial than emigration?—I think so; the same expense employed in emigration would probably be more beneficially employed in the country.

621. Would not such establishments, if well conducted, be made to act as useful agricultural model schools?—They would certainly, if a proper system could be devised for them.

622. Would it not be useful, in your opinion, to give powers to grand juries in cases of mendicity associations, to let land for the purpose of improving and cultivating it?—It would be very useful in the country no doubt, but I am not quite sure whether grand juries are the best persons to manage them or not.

623. What other persons would be?—I do not know. I mean the principle appears good, but I am not sure how far they could be regulated to avoid abuse or mismanagement.

624. You are aware that grand juries at present have the power of appointing in the case of gaols, a committee of superintendence, and it is generally found that the management of gaols in Ireland is under that control subject to little or no abuse; and do you not think a power might be given to grand juries of appointing a similar kind of superintendence in the case of these poor colonies?—I am not aware of the fact, but it is a strong argument, if correct, that the same principle might be adopted for the improvement and reclamation of lands.

625. With respect to loans, does it appear to you it would be more beneficial to leave the time for the repayment rather to the discretion of the Board and the Lords of the Treasury, than to have the time fixed, as it is by the Act at present?—Twenty-five years appears to be a reasonable length of period to be given in the first instance, and there is always power to prolong it further if necessary.

626. Then you would make no alteration in the Act in that respect?—I would not.

627. One of the advantages of the money advanced by Government for loans and issuing Exchequer bills was, that the bills should be issued in Ireland, was it not?—It was, and the interest payable in Ireland.

628. And it has proved beneficial?—I am told by monied and mercantile men, that that measure has been of great service.

629. Would you not recommend in any future loan of money for this purpose, or any other purpose connected with Ireland, that Exchequer bills should be issued there, and the interest should be payable there?—It appears to me the most useful mode of making issues that could be adopted for such purposes, but it would be convenient if the Board had the power occasionally to issue money for small loans.

630. For what purpose?—For all purposes of the advance of small sums.

631. To whom is the premium now paid arising from Exchequer bills, or who receives the premium now paid?—It goes to the benefit of the work it is accounted for. If we lend 1,000*l.* and there is a premium it is added to it.

632. Does it form part of the money borrowed?—Yes, they account for its expenditure.

633. Would not the parties get the benefit of the premium?—They would; but we have reason to know they apply it to the works.

634. They do not pay it to the country?—No.

635. Supposing the party borrowing agrees to make the work for 100*l.*, and the Exchequer bill which is issued to him produces 102*l.* in the market, does he not get 2*l.* more than he bargained for?—He does.

636. Are you aware, in England, that in issuing Exchequer bills for Public Works the 2*l.* is charged to the party?—In that case I imagine that the Exchequer bill must be negociated before the money is issued; there the issue is in money, and not Exchequer bills.

637. Would you see any objection to pursuing the same course in Ireland?—The consequence would be, we should have the negociating of all the Exchequer bills and issuing money for them; I do not see any reason why that should not be done.

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638. Would not the premium so received defray the expenses of the establishment?—Certainly not; it is not an annual interest; it is only on the first issue of the bill.

639. Suppose the premium on Exchequer bills to be 30*s.* on 100*l.*, would that not be a total saving to the country on the whole issue of 500,000*l.* of 7,500*l.*?—Yes.

640. If no further money should be advanced by Government, and the original fund exhausted, how long would it be before you could again resume the lending of money?—It would take a period of twenty-five years before the whole 500,000*l.* could be reissued; it requires the amounts to be repaid and the Exchequer bills to be paid off before we can reissue them; that is, there must never be more than 500,000*l.* outstanding at a time upon these loans; and it is only as they are repaid they can be re-issued.

641. Does that principle extend to the loans under former Acts now in the course of repayment?—No; they are never reissued at all.

642. Do you not think it would be necessary that the Act should be altered in that respect, and when monies to the amount we will say of 10,000*l.* are repaid, that there should be again a reissue as to that extent?—That is precisely the law as it at present stands; for instance, in July next we shall have 5,000*l.* or 6,000*l.* which we shall be able to reissue a second time; but the reissue under the present law would be very slow.

643. It will be more accelerated in future?—Yes; but still it will be twenty-five years before the whole is reissued.

644. Are you restricted from reissuing as the money comes in?—The money must come in, and Exchequer bills to the same amount must be paid off; the first Exchequer bills will be paid off in the month of June or July next to the amount of 9,000*l.*, and we can reissue then to any amount within that sum that shall have been repaid; there is, however, a question in my mind as to which I am not satisfied how the Act would operate; the clause stipulates that there shall never be more than 500,000*l.* of Exchequer bills outstanding on account of these loans, and if these Exchequer bills are renewed, as the monied and mercantile men are anxious they should be, and as they are in England, instead of their being paid off, whether that would, under the terms of the Act, prevent the reissue; such reissue being in new bills would occasion more than 500,000*l.* in the market at once.

645. Do you conceive you will be in a situation next June to give notice that you will resume the reissue?—We have not had occasion to give notice of the funds being exhausted yet; we have a few thousands left.

646. But if those thousands so left should be paid in the course of this month, would you then be in a situation to resume the further lending next June?—We should, to a small amount.

647. Are your accounts subjected to the Audit Board?—Part are, and part are not.

648. What part are not?—Those which have originated in the recent Act are not; they go direct to the Treasury; some of the accounts proceeding from the working of the old Acts go to the Audit Office.

649. Do you not think it desirable that all public accounts should be subject to audit?—Certainly; but the accounts are very effectively audited in our own office, and there is a considerable expense in preparing accounts for the Audit Office.

650. Upon what ground do you charge the grand juries five per cent. upon loans, and public bodies only four per cent. upon loans?—Five per cent. is the sum stated in the Act, and we take it for granted that is the sum meant to be imposed, unless an exception is required for reasons given.

651. Do you not think it would be advantageous to Ireland to let grand juries who give unexceptionable security, have the money at the current rate of interest of Exchequer bills at once?—It would. Whenever we have recommended a lower rate of interest, it has always been assented to by the Treasury.

652. In point of fact, as the practice at present stands, Great Britain lending to grand juries in Ireland, makes a profit upon the loans of two per cent. on the most unexceptionable security?—Yes, but the understanding was, that that excess of interest should pay the expenses of the Board in the management of the fund.

653. Do you mean to say that the excess of interest pays the salaries of the officers and the expenses of the Board?—I believe it would pay the whole expense of the Board.

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654. Is not two per cent. on 500,000*l.*, 10,000*l.*, and are not the expenses of your office something less than 3,000*l.* a year, showing a profit to Great Britain, as the lender, of 7,000*l.* a year upon these loans?—A great portion of these loans are at a less rate of interest than five per cent., and the expenses of the entire establishment of our Board are more than 3,000*l.*; they amount to upwards of 5,000*l.*

655. Do you consider it equitable that the parties borrowing this 500,000*l.*, which you are authorized to lend, should be charged with the whole maintenance of the expense of a Board; a Board embracing other objects besides the advance of this money?—It is not for me to say that any measure of Government, and sanctioned by the Legislature, was not equitable. Perhaps the consideration that the Board has a great many other duties to perform besides this loan fund; more duties than were probably anticipated when the Board was constituted; the consideration of paying them out of that particular fund might be abandoned.

656. Are you not aware there is an annual grant of 5,000*l.* a year for the management and repair of the Highland roads?—It appears so by Mr. Rickman's evidence, which is printed.

657. Do you not consider the security of the grand jury presentment as unexceptionable?—Quite so.

658. Are you aware that loans are made by the Exchequer Bill Office in England at a much lower rate of interest than in Ireland?—I am not aware of it.

659. Now as to fisheries, the several powers given to the Boards relating to fisheries in Ireland, previous to the passing of the Act in 1831, have been transferred to your Board?—They have.

660. Have you been called upon to act in pursuance of those powers?—We have, frequently.

661. In what respect have your powers been called into action?—To interfere in what have been considered breaches of fishery regulations, and to take measures to prevent combinations among fishermen on particular parts of the coast.

662. Have you been successful in your endeavours to put down those combinations?—We have not; we found we had no powers.

663. What was the nature of the combinations?—I can give one recent instance: the fishermen of the Bay of Dublin complained of having been interrupted by those of the Skerries (which is a little to the north) in their attempts to fish and to land on that part of the coast, and applied to the Irish Government, who, upon consulting the law officers of the Crown, were informed, that the only remedies that could be applied must be through the Board of Public Works, as successors to the late Fishery Board. Upon looking at the Act, we found that all the regulations were so mixed up with the system of bounties that they could not be separated from them, and the bounties now being done away with, the Act was in point of fact inoperative; but even otherwise, we have no funds for carrying any regulations into effect, nor any establishments on the coast to entrust them to.

664. Is there not a fund of 16,000*l.* belonging to the Fishery Board?—There is, but the application is limited to certain purposes which are defined, which I do not precisely remember; but it gives no general discretion in its expenditure.

665. Does not a large portion of that sum consist of a balance in your hands applicable to the building of piers?—I believe it was vested for that purpose, but it is no longer applicable. We considered we had no power to commence new operations with that fund. We obtained authority last year from the Treasury to extend the operation of that fund in repairs to the piers that were very much in want of them as a temporary measure, till some fixed regulation should be entered into for their future preservation.

666. Were many of the piers for which Government had granted sums unfinished at the time the present Board came into operation?—Very few; only three or four, I think.

667. Is any part of that sum in your hands applicable to the completion of those works?—It is, and we are now completing them from those funds.

668. Supposing a power was given to the grand jury of presenting half the amount that would be required for building a pier, provided the Board were willing to contribute the other half, would you consider yourself justified in applying any part of that 10,000*l.* to that object?—This balance has arisen from certain votes under an Act, the particular provisions of which I do not distinctly remember, and therefore I am not aware how far those provisions might be infringed upon by such an appropriation.

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669. What means have occurred to you for preventing this combination among fishermen?—I think the whole Fishery Law requires consideration and revision.

670. In your Report, I see there is a suggestion that it would be desirable to call upon some party to make a specific report as to the measures which were useful for encouraging fisheries; has that suggestion in view the appointment of a commission for that purpose?—The question of fisheries is a very important one, and requires a great many researches, and a great deal of consideration; and I do not imagine that can in any way be better done than by a commission appointed for the purpose, unless some gentleman, a Member for one of the maritime ports of Ireland, would undertake the inquiry, and bring in a measure for the purpose.

671. Has any particular plan suggested itself to you to prevent this combination?—I think combinations might in a great measure be prevented by the remedy applied for on the part of the fishermen, which was merely to require that all the boats on the coast should be numbered, and have their owners' names painted conspicuously upon them, which would give the opportunity of detecting the parties and having them punished, and thus probably prevent any future aggression.

672. Are you of opinion that pecuniary assistance might be usefully given to the fishermen, for the purpose of enabling them to make larger boats than they have at present?—There was a loan fund for that purpose some years ago, but the fishery was so precarious, that one or two successive bad years and the removal of the bounties threw the men into distress, and a very small portion of the loans was recovered.

673. Would you recommend the renewal of bounties?—I think the whole question should be considered by the commission; I have before stated, it involves so many considerations, and so much matter of very great importance.

674. Do you think the powers given you by the Act are sufficient, or that any further powers should be given to your Board, or a distinct board formed relating to fisheries?—I should like to know what are the nature of the duties required, before I could give an opinion as to whether our Board could efficiently perform them.

675. Do you find generally that loans to an inferior class of persons like fishermen, are as punctually repaid as when made to persons of a higher class?—The only loans we have cognizance of to that class of persons have been to fishermen, and they failed for the reasons I have mentioned before.

676. Have you, in fact, abandoned all hopes of recovering a great proportion, if not all, of those loans?—Yes, we have recommended the Treasury to absolve them of their engagements altogether, and it has been assented to; the endeavour to enforce repayment only led to law costs and increased distress.

676*. In the former part of your evidence, you recommended the building of small piers, and also powers to be given to grand juries to contribute towards the building of such piers; have you thought of any mode of providing for the repairing of those piers and small harbours when erected?—I have thought of several modes of providing for the repairs.

677. What particular mode occurs to you as most beneficial?—I was inclined to think that a small toll on all vessels making use of the piers might be made available; but in very remote parts, where they are little used, the expense of collection would be more than the receipts; in such cases, I think the grand jury might contribute to the repairs, as they do to the repairs of roads; the expense would be very trifling.

678. Would not the piers and small harbours be extremely useful to afford shelter to fishermen, and enable them to prosecute their business?—Not only highly useful to the fishermen, but they encourage in a great degree the improvement of the lands in their neighbourhood, and are made little ports for sending out the produce, and introducing articles that are wanted.

679. Do you find in general they give rise to small villages in the neighbourhood?—They do. I have been told that the little circle under their influence frequently resembles an oasis in the desert.

680. I believe you are acquainted with Scotland?—I am.

681. Have not several towns sprung up by means of the encouragement given by the British Fishery Society to the fisheries on the coast?—There have; but the Scotch have shown a greater disposition to prosecute the fisheries than either the English or the Irish.

682. Are not the same facilities afforded on the Irish coast to the fishermen as are afforded on the Scotch coast?—I should imagine that the Scotch are not

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so entirely without regulations as the Irish fisheries are, but I am not aware of the fact.

683. Is it not your opinion that there exists a large and most productive field for enterprise and for the investment of capital, as yet undeveloped, in the Irish fisheries?—I understand the coast of Ireland to be particularly favourable for fisheries.

684. Do you not think that an enlargement or extension of the existing fishery piers would be desirable, so as to enable vessels not exceeding thirty tons' burden to take shelter at all stages of the tide?—Many of the existing piers are capable of great improvement, and an increased number of small ports on the coast of Ireland would be extremely beneficial: they are not, however, places of refuge, unless they afford shelter at all times of the tide.

685. Would it not be advisable to make a free grant of one-half the expense of such enlargement or extension, or for the erecting of new fishery piers, and that the granting the other half by the respective grand juries should be compulsory, and that such moiety should be advanced by the Board or Treasury on the usual terms?—We have a power to that effect at present, to an extent not exceeding 1,000*l.* for each pier.

686. Will you add to that answer in which you state you have the power to a certain extent, whether you think it desirable to give an enlarged power to the Board, as, for instance, supposing a pier required 3,000*l.* or 4,000*l.*, whether you should not be allowed to contribute one-half of that, the grand jury contributing the other half?—We cannot exceed 1,000*l.* grant at present, but I think it would be very desirable to enlarge the power and not to limit the amount.

687. Would it not be desirable to have some persons appointed superintendents, to see to the piers and keep them in repair, as you would suggest respecting roads?—Some person in charge would be very necessary, but for many of the small piers the expense of a formal superintendent would be too great.

688. Could it not be put under the control of the County Surveyor?—I think it would work better, perhaps, under the Coast Guard, for this reason; that they are on the spot in most cases, even in very remote situations, and the expense would be small. I would not lay down any precise law, because different cases would require different systems.

689. Would it not be right to exact tolls from vessels seeking shelter?—I think it would be reasonable to take tolls from vessels receiving shelter, and also from boats and others receiving benefit from the work; but in some cases, where the piers are but little used, I fear that the expense of the collection might be more than the actual receipts.

690. Could you not let out the tolls?—You might in some places.

691. Why not in all?—You could not get a person to take them. There is another point worthy of notice, which is, the propriety of enforcing some regulation as to these piers. I have known the case of a person taking possession of one of the piers, and landing his goods upon it, and entirely occupying the whole of the pier, to the exclusion of every body else, for months and longer.

692. How would you prevent such an occurrence?—By a power on the part of the individuals employed by the Board to levy a fine.

693. Do you not think such a power might be entrusted to two magistrates?—Certainly, where the magistrates are at hand. In many cases of these piers, magistrates are not to be found within twenty miles.

694. Might there not be a superintendent for a certain district, though not for each particular pier, to whom powers might be given for effecting that purpose?—The situations are so very remote and distant from each other, many of them are only to be approached by boats, with no roads to them at all, and so much so that our engineers have found at times great difficulty to get at them; they found them, however, notwithstanding extremely useful to the poor people and the little colonies around them.

695. Would it not be desirable in those cases to make roads from the piers so as to cause a communication with the leading lines of road by the Board?—Many of them are so far from the leading lines of road, that for this object alone it would hardly be worth the expense to construct a road; you cannot lay down any general system for all cases.

696. At present you have the power of giving grants to the amount of 1,000*l.*; have you not also the power of keeping the works in repair?—No; the parties

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who provide the other moiety are bound under the present law to make arrangements for their preservation.

697. Are you of opinion that that should be in the hands of the Board and not in the hands of private individuals?—I think these piers might be kept in repair in the same way as the grant roads are by the Board, and repayable by grand juries.

Mercurii, 8° *die Aprilis*, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *John Fox Burgoyne*, called in; and further Examined.

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698. ARE there not, according to the Report of the Commissioners, somewhere about three millions of acres of bog and mountain-land unimproved, and in a state of waste in Ireland at present?—There is an immense extent of mountain and bog.

699. That includes mountain as well as bog?—Yes.

700. There are great impediments to the cultivation of those tracts of bog at present, owing to the vague nature of the property of the joint owners in the neighbourhood of them, are there not?—There is a difficulty in effecting the drainage of large tracts of bog in consequence of the mixture of properties, which was attempted to be relieved by the Act brought in by Mr. More O'Ferrall, two Sessions back.

701. Has that been successful?—It has not been operated upon at all in any instance; I believe if it had, the Board of Public Works would have had cognizance of it.

702. What is the cause of its inoperativeness?—That I am not aware of; I presume some difficulties were found which were not anticipated.

703. Have you ever contemplated such a proposition as this: supposing a power was lodged somewhere, in your Board for example, to undertake by consent of a certain proportion of the persons interested the reclamation of a tract of bog or mountain, and the first steps to reclaim it taken, making the main drains and so forth, that the Board should be empowered to undertake those improvements by consent of a certain proportion of the persons interested in the property, and to repay themselves for the expense by a sale to the amount required of portions of the land so reclaimed, dividing afterwards the reclaimed waste among the different owners, in the proportions of their respective properties as determined by a jury?—I doubt whether it would ever pay the expense if done on a large scale. I think all reclamation of bog or mountain lands must be performed by degrees, by small measures of improvement.

704. You do not mean by an individual merely taking in a tract of a quarter of an acre or an acre of land?—Not perhaps in such very limited quantities, but in small portions, and bringing them into cultivation by degrees, paying only a nominal rent for a certain number of years.

705. Is it not the fact that these bogs require improvement on a very large scale; the making of a great drain or a road across them which is beyond the power of small tenants of combined owners till their shares are ascertained and all chance of litigation at an end?—The roads can be done well by our Board; it is the kind of work within our province.

706. Is it not the same in respect of drainages?—Yes, but I believe it is rare that any large artificial drains are necessary.

707. In the case of a large bog of 100,000 acres for instance, might not an improvement on a large scale be carried on advantageously to the country?—I think not, if it is meant to the return of an immediate profit.

708. Is not a general drainage in those cases sometimes necessary, and would you not give a power to the Board of a general drainage?—Yes, I would; I said before that I thought our Board might be employed beneficially in making roads or canals or navigations, or any specific work through a bog, but not in the agricultural reclamation, such as laying manure or preparing the land for crops; the drainage is a very small portion of the expense; in the reclaiming of bog it is necessary to put materials upon it, which is the heavy part of the expense.

709. The

709. The only work you would be called upon to make is, the main channel to convey the water from that district?—That we could do; and it appears to be a proper application of the public money to open roads from any considerable outlet for drainage, and such works as are necessary before a reclamation can take place.

710. Have you read and examined the Report on the Waste and Bog Lands of Ireland?—I have read a great many parts of the Bog Report.

711. Do you agree in the conclusions there drawn as to the practicability?—The opinions formed by the engineers at that time were very favourable as to the profits to be made from the reclaiming waste lands, but I suspect that the result has not answered those anticipations. Many Members of the Committee can give much better information upon that subject than I can, and if the Committee think of calling Mr. Griffith, as I understood to be the intention, he will be able to give very valuable information on it. He was engaged in making those Reports, and he is a practical and scientific man, and is, I believe, at this moment reclaiming bog in the Crown lands.

712. In your evidence the last day of examination, you spoke of the utility of grand jury assessments for the improvement or repair of fishery piers; do you think it would be advisable to apply that to the landing piers necessary on the Shannon for the landing of goods?—I mentioned that I thought it might be usefully applied to works of any degree of public utility.

713. How would you propose that those piers should be kept in a state of constant repair?—Contemplating that Government would pay part of the cost of construction, my idea was, that Government officers might keep them in repair as they do the roads.

714. The question refers to the piers necessary along the Shannon for internal navigation; would you recommend the adoption of tolls for the repayment of the expense contracted in the execution of those piers in the Shannon?—It would be very desirable to have power to levy tolls on such works, partly to pay the expenses; for it would be a reasonable charge on the persons who benefited by them, and also tend to give a power of regulation, which it is sometimes difficult to enforce without a toll; but there is one difficulty: to levy tolls requires a specific Act of Parliament for each case, and unless there was a general Act which would give a power to embrace a great number of such objects, the expense would be too great for any one such work. I believe there is a difficulty in giving a general power; there was an Act in the last Session of Parliament, to which, I understood, The Speaker had objected on some constitutional grounds.

715. Do you allude to the Bill brought in by Mr. O'Connell for inland navigation?—I believe it was that.

716. Do you believe a power of regulation could be given without a power of toll to prevent, for instance, the landing of different articles on those piers, or suffering them to remain there without permission on the part of those persons who had contracted for the repairs?—Certainly; only it would be more expensive.

717. Does your experience lead you to think that the want of this power of regulation very considerably contributes to injure piers and render frequent repair necessary?—Yes, it does; boatmen are in the habit of even stealing the stones of the piers for ballast, and positively destroy the very edifice which gives them shelter. They do the same on the roads; they build their houses from the stones taken from the very bridges as well as fences in the remote parts of the country.

718. It is very important, when the outlay of the public money is in question, that due provision should be made for the permanence of the work executed?—Yes; and in the case of piers the want of such provision is much felt.

719. That is a clause which you think requisite in any future Act?—It is very much wanted; but with regard to the fishery piers, I think it might make part of the inquiry which I before said was necessary for a revision of the fishery laws, which are at present totally inoperative.

720. Do you think the County Engineer or Surveyor can act as Inspector over those, and that a clause could be introduced into the present jury law to enable him to keep the piers in repair?—The County Engineers have more duty at present than they can perform.

721. Do not you think that the persons to whom are entrusted the repairs of the piers ought to be the persons to have the regulating power?—Yes; they would be able to do it, and do it more efficiently than any others. At present, the charge of the repairs is laid upon the person who provides the moiety of the expense of construction; piers have been taken possession of in some instances by parties for

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a considerable time, to the exclusion of others, and there is no power of applying a remedy.

722. Could not some arrangement be made, or a power by Act, to make an arrangement between the Board of Works and the grand jury of the county to nominate some persons to superintend the pier, and enforce whatever regulations might be considered necessary?—I do not apprehend there would be any difficulty in making arrangements for that purpose; I think it would be difficult to make any joint appointment.

723. Do your remarks with respect to piers in a former part of your evidence apply exclusively to fishery piers?—They have all been called fishery piers in the Acts of Parliament, which authorize grants of money, and for that reason we continue the designation, but many of them are quite as efficient for agricultural improvements as for fisheries.

724. A petition was presented to the House of Commons last night, praying the construction of a pier called Ballyvaughan, in Galway Bay; are you acquainted with the localities of that spot?—I have had occasion to examine the plans and the projects for that very work.

725. Is it your opinion that such a pier would be useful to the Bay of Galway and to the export of agricultural produce from that part of the county of Clare?—As far as we went into the examination, we thought it would be useful.

726. Have you any suggestions to offer to the Committee with respect to establishing a regulation and control on the part of your Board over the county surveyors?—I think some central authority over the county surveyors might be useful to regulate their proceedings, and to carry the improvements which may be made by one into other counties. At present they all act independently; and if one begins in error, he may continue so for twenty years.

727. They were all examined before you?—Yes.

728. Do you think them all sufficiently qualified to prevent the risk of their making any great mistake?—We found many of them in some degree deficient in particular points.

729. Did you reject all who were inefficient?—No, not all, we recommended the best; we did not think all of them perfectly qualified to the extent we considered desirable.

730. Has your Board the power at present of removing the county surveyors from one county to another?—We have nothing to do with them.

731. Do you think it desirable you should be invested with that power?—No, I think it should remain with the Lord Lieutenant; he has that power under the Act.

732. Has he it without an application from the grand jury?—I believe he has. With regard to the competency of the county surveyors, I think the result of that examination would tend to improve them; many of those gentlemen must have become sensible that they were deficient in some points, and that which was made apparent to them I have no doubt they have endeavoured to correct.

733. Do not you think that a regular school for civil engineers, such as exists in Prussia and France, would be a much better guarantee to the public for fit persons than the examination of any Board?—That would require much consideration.

734. Would not such a system as that lead to a monopoly on the part of the corps that was instituted under Government?—That is one difficulty I should feel about it, that it might tend to force the whole of the employment on the persons educated in that school, and prevent that of others who might be fully competent.

735. What particular description of control would you suggest to be vested in the Board over the body of county engineers?—Such a control as would assist them in their operations, and tend to introduce the best mode of carrying into execution the Public Works. I would have occasional inspections by a superior class of engineers, sent by the Board round the country to examine the works and report on the system on which they were performed, who would propose and suggest such corrections as might be desirable, and such improvements as are made every day in England and other parts of the country, which cannot otherwise come under the cognizance of gentlemen in the distant parts of Ireland.

736. To whom would you have that inspection reported, to the grand jury, or to the Government, or to the Board?—In the first place, I would have it made to the Board; it might subsequently be laid before the grand jury or the Government; such an arrangement would not interfere, I apprehend, with the legitimate power of the grand jury; the object being more to cause their works to be executed with more

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economy and skill. It might be made the means also of pointing out to grand juries how various operations might be combined by contiguous counties.

737. In that case your establishment must be increased?—Yes.

738. You have but one engineer at present?—We have but one engineer at present, but we employ others as their services may be required; we have a very considerable number of roads, and they are daily increasing; it is in our contemplation in a short time to employ an engineer expressly for the purpose of roads, that is, whenever we shall have sufficient to bear the charge; we think an engineer for that distinct service would be very useful, and we have even a gentleman in our eye for the situation, who we think would answer remarkably well.

739. Do you think it desirable that a report should be sent from each grand jury half-yearly to the Board of Public Works to enable them to form a proper idea of the works going on throughout the country?—Collecting such information might be, no doubt, very useful; but it perhaps might be more respectful to the grand jury if the communication was made to the Irish Government, who would probably communicate it to the Board.

740. Do you think that the reducing into a condensed form the information so received, and communicating it to the several grand juries in Ireland, would contribute to the improvement of the proceedings they adopt in the formation of their Public Works?—All the counties would no doubt derive useful information from such a collection of facts, and perhaps be more ready to combine their operations.

741. It would be useful to have six engineers, one to go each circuit and attend each grand jury at each Assizes, to pass his opinion on the plans and elevations submitted to the grand jury, would it not?—I think some superior judgment upon the county works would be very desirable, but I cannot say exactly that the arrangement proposed would be the best; I should think that by the plan before proposed, of putting the operations of the county surveyors under the investigation of the Board of Public Works, the effect might be answered.

742. Do you conceive that the county surveyors are at present adequately paid?—No, I do not, by any means.

743. Has a search for coal mines come under your cognizance?—We have had one application for opening a culm pit.

744. In what part of Ireland?—In the county of Cork or Tipperary.

745. Did you comply with that application?—It was assented to, but not followed up by the party.

746. What is your salary as Chief Commissioner?—Mine is 1,000*l.* a year; the other Commissioners 600*l.* a year each.

747. What were the duties of that office at the time you were first appointed to it?—They were various; they have been added to very much since; but I imagine it was in contemplation at the time we were appointed that many duties would be added; I think, as far as our salary goes, it is liberal, and we do not complain, whatever duties may be put upon us.

748. Might not the duties be so increased as to render it impossible for you to perform them?—Whenever any new duties are put upon us we have been hitherto consulted to know whether we are equal to undertaking them, nor have we ever objected as yet.

749. In the Committee on the Shannon Navigation you stated that you would be able, with the assistance you at present have, to take the entire direction of the Shannon if put under your direction?—I do not know that I went to that extent; if I did I must have alluded to the body of Commissioners only; we have taken a great number of duties under our superintendence with a very small increase in the number of the establishment, and we have carried it quite as far as it will go with the same number of persons employed.

750. Can you state to the Committee what is the amount of the arrear due to your Board?—The arrear is on the table.

751. How much of that do you consider irrecoverably lost?—I have before stated.

752. What steps do you take with regard to treasurers of counties who are behindhand in their balances?—It is a general custom, I believe, in collecting repayments, to give a certain degree of latitude, and we have given that latitude to county treasurers, but not at all beyond what we considered reasonable; whenever the repayment was deferred to such an extent as we did not consider proper, we appliedt o the grand juries, and in one or two cases we put the matter into the hands of our solicitor.

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753. What delay do you consider not too great?—I imagine that a month or six weeks is not too long.

754. Do you ever allow it to exceed that time without taking steps to enforce repayment?—No definite time has been fixed, but it is attended to by our accountant, and is reported to the Board if the repayment is delayed more than usual; we then commence by remonstrating with the party, which usually has the effect of producing the money.

755. There is a balance almost every month against the public?—There must be a balance unless the day of repayment is identical with that on which the account is made up.

756. Still there appear to be in some cases small outstanding balances, as if the treasurer of the county and the Board were not quite agreed as to the sum exactly due to the Board; is that the case?—They are quite agreed now; when we first went through the accounts there was a little difference on the extra charge made, in consequence of having considered that they had not been properly settled before, but in every case, upon consideration, the parties have abandoned their objections.

757. Do you mean to say that, except in the case of one county, there is at present no treasurer seriously behind-hand?—There is no treasurer at present considered so far behind-hand as to require any extraordinary steps. I had a letter only a few days ago on that very subject from Ireland; it would be very hard to allow of no excuse for not paying on the precise day; there may be a thousand circumstances to account for it, illness or a variety of considerations to prevent it; and as it is not usual, I should be very sorry if the Board were to commence a system peculiarly rigid beyond that of any other party; if it is to be so I should prefer its being forced upon us.

758. Is there any assignable reason why a county treasurer should be in arrear three weeks after the assizes, he having the money in his pocket?—I am not aware, but I think the county should regulate that themselves; they have the power of doing so.

759. In point of fact it does not come before them?—They have the auditing of the account.

760. It does not come before them for nine months after the error has been committed, whereas the Board of Public Works is a permanent body?—There is a certain latitude generally allowed in making repayments, and I think if we had endeavoured to commence a system different from that usually adopted, there would have been a great outcry made against the Board, and perhaps with some reason.

761. The county treasurer has the money in his hands, and therefore it would appear there is no reason why he should not at once pay it over to the Board?—There is no reason, certainly, if he has the money.

762. What is the longest time you have known of a county treasurer having the money in his hands and withholding it from the Board?—I do not know the particulars from memory. One of the Commissioners is a very superior accountant, and has taken particular charge of that branch of our business; he says that he considers the payment is very fair on the part of the county treasurers, and he is not at all inclined to be too lax; for by reforming the system of repayment he recovered at once a considerable balance for the public.

763. Do they make default in payment when called on?—We give notice of the periods when money is due, and they pay within a reasonable time afterwards.

764. There is a good deal of difficulty in making the payments at present, is there not; as the treasurer must come himself or appoint some person in Dublin to make a lodgment?—I believe there is no difficulty in making the payment through the Branch Banks or sending remittances.

765. Have you known cases in which the county treasurer has delayed for three months to make the payment?—I cannot state the precise time, but I rather think it has exceeded that.

766. Does any injury follow from the delay which takes place?—Injury follows to the county, none to the public, for we charge interest to the day of payment; but if that excess of interest is charged to the county, of course the county suffers by it; the treasurer himself ought to pay it if he delays it by his own default.

767. You charge that interest in the next charge to the county?—We charge interest to the very period of the repayment; that is contrary to the old system, but it is correct, and has been the means of effecting a considerable saving to the public, besides promoting more prompt payments.

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Alexander Stewart, Esquire, called in; and Examined.

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768. YOU are solicitor to the Board of Works?—I am.

769. Have you been employed by them in perfecting any loans?—Yes, several.

770. With public bodies as well as individuals?—Yes; very few with individuals however.

771. Did you require the title to the estate to be submitted to you in the case of individuals?—Yes.

772. In like manner as if you were about to complete a purchase or a mortgage?—Yes.

773. Did you observe the same strictness of investigation?—No.

774. In what respect did you make a difference?—There was a liberality on the part of the Board to facilitate loans that there would not be in the case of an individual.

775. Have you made searches for judgments and other incumbrances?—Yes, for incumbrances in the Registry.

776. Were those searches for judgments and incumbrances attended with great expense?—I do not know that I ever searched for judgments against any one.

777. Why did you not?—The individuals to whom the Board lent money have been very few; I could almost name them all, and the securities did not require judgment searches.

778. Name them?—The Knight of Kerry was one; the security he gave was a charge under a power of appointment, which he had under a family settlement, and he appointed accordingly.

779. Would not prior judgments affect that?—I think they would affect the estate.

780. Why did you not search for judgments?—Because the title to estate had been lately under investigation by legal men in London; and there was an existing mortgage to the extent of 24,000*l.* or thereabouts, to which it was agreed the Board should get precedence.

781. Did the mortgagee consent to your getting precedence?—Yes, she did.

782. Then you were satisfied with the title she had?—Yes, nearly so, but under the Attorney-General's advice.

783. Where you were not satisfied, would not you think it necessary to search for judgments in all the courts of Dublin?—Yes, certainly.

784. Are not those searches attended with considerable expense?—Not so great as they were, but they are attended with considerable expense.

785. Do you remember the whole expense attending that loan to the Knight of Kerry?—Somewhere about 100*l.*

786. What was the sum raised?—Seven thousand pounds, but that 100*l.* included the whole expense; there was no other solicitor employed in Ireland.

787. Do you know whether he employed a solicitor of his own upon that occasion?—None, in Ireland; I got the statement of title from the solicitor to the mortgagee, of whom I have just spoken, and the Knight of Kerry probably paid for the copy of it.

788. Will you state the expense attending on another loan you made to an individual?—Some of them about 3*l.*; we have the power to lend on personal security.

789. When you lent on real security, what was the expense in respect of one other case; take Lord Duncannon's for instance?—It was this; he applied for 2,000*l.* to drain, and the Board were anxious to lend him the 2,000*l.* upon the bond of himself and one or two other persons he proposed, but on looking to the Act of Parliament, found the Board were limited, in the case of personal security, to 1,000*l.*; it was suggested to him the propriety of proceeding with the loan, which however he did, and his English solicitor sent over to me a statement of his title; it was very voluminous and very complicated, so large a title that I was obliged to give the Attorney-General a considerable fee with it and the deed of mortgage.

790. Then he had to pay a solicitor in both countries?—The solicitor in this country had little to do; he sent me a copy of that which existed.

791. Did he not charge for the copy?—Yes, I suppose so.

792. What was the charge of that copy?—I do not know; it must be very trifling.

793. Can you state the expense attendant upon that?—Yes, upon that loan it was 120*l.*, or thereabouts.

794. And the whole amount advanced 2,000*l.*?—Yes, it was too much; I saw how it would be in the first instance, and mentioned it to the Board. The Com-

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missioners regretted that they had not the power of avoiding this expense; when I sent over my bill of charges to the English solicitors here, I told them I felt it was more than I should wish incurred in so small a loan, but that they were aware what was done, and I directed them to deal with it as they thought proper, and that I should be quite content with any thing they thought fit to pay.

795. Did you feel yourself bound to go to that expense?—Yes; I had the Attorney-General's directions for every thing done.

796. You would not have done your duty to the Board without it?—No; and even acting as we did, a good deal was taken for granted which I would not in the case of individuals.

797. If it was for 500*l.*, you would go to the same expense?—No; we should lend it then on personal security, merely inquiring as to the solvency of the parties. The Board do not wish me to incur the expense of searches in loans of this kind.

798. If it had been 1,200*l.*, the same expense would have been incurred?—Yes, if the security was the same.

799. The expense would not have been greater, if it had been 10,000*l.*?—No; we lend, perhaps, thirty and forty thousand pounds where the expense does not amount to so much, and sometimes not to one-half.

800. With regard to the public bodies, what investigation of title do you require respecting them, or do you require any?—Public bodies who have the power generally, give the tolls and profits of the undertaking as part of their security, and they also covenant to convey afterwards the property when acquired, as in the instance of the Dublin Railway Company; a mortgage was granted upon their profits, and there is a covenant in that mortgage that they will, when they acquire the ground, convey it to the Board as further security. When I came to examine into the title of the Company to this ground, I did not go over the same ground as the Company did, but I was directed by the Attorney-General to see that they had proceeded according to the Act of Parliament, and that the directions of a counsel of some standing at the bar had been attended to.

801. Then you do not investigate the title, but see that the directions of the Act of Parliament are complied with?—Yes.

802. Is that the case with every public body you lend money to?—There are but two or three who have given us that additional security of land.

803. What has been the expense attendant on the security given by the Dublin and Kingstown Railroad Company?—One hundred and thirty or forty pounds, or thereabouts, as well as I recollect.

804. What was the advance?—Seventy-five thousand pounds. They have not yet conveyed to the Board the land, and that will require a further deed, at an additional small expense.

805. They purchased land from different proprietors, did they not?—Yes.

806. Did the Board require they should make a title to each of those different parcels?—No.

807. What security did you take from the Commissioners of Galway Harbour?—A mortgage of their tolls, and some small landed property which they acquired.

808. What was the expense attendant upon that?—I think it was between fifty and sixty pounds, and afterwards under twenty.

809. Under eighty pounds altogether?—Yes, as well as I recollect.

810. What was the advance?—Seventeen thousand pounds, as well as I recollect.

811. Has not considerable relief been given to the public in not requiring stamps to be taken?—Yes, very great; that is a very great inducement to parties to borrow.

812. Has not great relief also been given to the public in not requiring stamps on the presentments of grand juries?—That was not given by this Act; the late Loan Commissioners proceeded in a different manner in making loans to grand juries from what the Board of Works do. When the Board was first constituted, I drew, by their directions, a form of presentment upon which advances were to be made; this form was approved by the Attorney-General, was then printed, and has ever since been used. I am seldom applied to in loans of this kind.

813. Would it not be very encouraging to persons to borrow money, if you adopted the same form as to individuals and public bodies?—The same form could not be adopted in all cases; certain stipulations and certain covenants are necessary in some cases, which are not in others.

814. You

814. You say very few individuals borrow of the Board; do you find very few borrow small loans on their personal security?—Very few, I think.

815. Do you think Section 37 interposes certain difficulties to the borrowing of those small sums; for instance, it states that the whole principal sum should be repaid within five years from the advance; do you consider that an obstacle to the borrowing?—No, I never found that.

816. Do you think that a sufficient length of time for money to remain out?—I think it is on personal security, particularly as the Board do not incur the expense of searching to satisfy themselves of the security.

817. Has any plan ever occurred to you, whereby the expense now incurred might be saved to individuals and public bodies?—No, I was never desired to consider it till the Board the other day asked me the question, with reference to searches; they seemed to think we might make searches without paying register's fees; I did since inquire at the Register Office how they were paid, and the establishment, I was told, is paid out of the Treasury, and the surplus goes to the Crown.

818. Is there a surplus?—Yes, I imagine there is.

819. Do you think that would be advisable, or fair to the public?—Yes, I do; I think it would encourage persons to come forward and borrow of the Board.

820. Do you see any objection to making money borrowed under this Act the first charge upon the land?—I think it would be quite right to make it the first charge upon the particular property to be improved, but it would be hard if the security was also to be made a first charge upon that which, though forming part of the security, was not to be improved by the advance from the Board; I think it would be quite right to make it a first charge on the part to be improved.

821. Supposing both parts were comprised in the same estate, would not it then be right to give a first charge?—Then I think it would not be unreasonable.

822. Have the Commissioners shown any disposition to be rigid on the mortgagees, or have they not attempted to reduce the legal expenses?—They have done every thing in their power to reduce the expenses.

823. They have always acted liberally?—Yes, very much so with regard to the parties applying for loans.

824. Can you furnish to the Committee a return of all the payments which have been made to you as solicitor to the Board of Works, by parties applying for loans from the Board of Works?—I can.

825. Have you that in London?—I have not.

826. Have you any suggestions to offer by which the legal impediments which appear to exist in the way of private parties applying for loans might be removed?—I think the loan on personal security might be extended to 2,000*l.*, provided there was a sufficient number of solvent sureties proposed, and by having registry and other searches made at the instance of the Board's solicitor, without stamps or charges being made by the officers in whose offices those searches are made, and also by making the security to the Board a first charge, as already mentioned, would tend to reduce the expense considerably.

827. What steps have you taken with respect to the grand juries that are in arrear, as to the paying up the balances due to your Board?—There were none of them ever put into my hands, except one or two, and the treasurer immediately paid.

828. What steps are in progress now with other parties towards obliging them to pay up their balances?—I have been instructed to proceed only against one person over his estate; I obtained some time ago an order for a receiver; he has since obtained an order from the Treasury in his favour; I speak of the case of Mr. Cromelin, who has never paid any sum on account of the loan made to him by the Loan Commissioners.

Veneris, 10° *die Aprilis*, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Charles Wye Williams, Esquire, called in; and Examined.

C. W. Williams, Esq.

10 April 1835.

829. ARE you a director of the Dublin Steam Packet Company?—I am a director and acting manager.

830. In that capacity have you had the opportunity of visiting Ireland and learning its capabilities with respect to inland communication?—I have to a considerable extent; perhaps more in a practical point of view than any other individual.

831. Have you, particularly with respect to the river Shannon?—Yes, I have the direction of a very large establishment on the river Shannon, and necessarily have given much consideration to the capabilities of that river for the purposes of commercial intercourse. The Company I represent have seven steam vessels and fifty barges of fifty tons average in their establishment on the river Shannon.

832. And to the communication between the Shannon and Dublin?—Yes.

833. I believe you were examined last year before the Shannon Committee?—I was at considerable length, principally on the details of improvement of which that river is susceptible.

834. Do you not find a great want of small harbours along both sides of the river?—There is a very great deficiency of small harbours, or almost any means of access for trading intercourse with the water. Roads in many situations run within a short distance of the water at places where great trading intercourse would prevail, yet the river is useless from the want of access to it, or any landing or shipping accommodation.

835. Would it not be of great service to the surrounding country if such small harbours and quays were erected?—Unquestionably, and I would state also that it is impossible, whatever the extent of navigation may be, that the country can have the benefit of it, without those aids to the navigation which small harbours, landing places and piers necessarily imply.

836. How does it happen that individuals do not upon their property erect these quays and harbours?—The individuals whose property lies upon the Shannon are in very few instances connected with the navigation in a commercial point of view, and there is no inducement for individuals to construct piers or harbours upon the navigation or opening them to the public, unless they had some means of remuneration whereby to reimburse themselves the expenditure, or be in some other way connected with or benefitted by the navigation. The improvement of the navigation and the construction of piers and small harbours must proceed concurrently.

837. Might they not have the power of raising tolls?—They could not have any power unless it was given them by some Act; some legal authority.

838. Would it be worth their while to obtain a private Act of Parliament for that purpose, having regard also to the quantity of tolls received and the necessary expense of repairing and keeping up these quays and harbours?—I do not think there is a situation on the Shannon where it is worth the while of the owner of the land to be at the expense of obtaining an Act of Parliament for the construction of a harbour or pier by which to enable him to levy tolls. I do not think the extent of the tolls would reimburse him, unless the navigation were so improved as to enable boats to ply with advantage. An individual upon his own ground may construct a harbour or pier, and he may exercise any power or authority as to its use, but that would be no benefit to the public; such piers or harbours would be merely for private accommodation, and as they would be always subject to the annoyance of having a right disputed of levying tolls, while he would have the expense of maintaining the work, no individuals would volunteer such.

839. How would you propose that those quays and harbours should be built?—I think that means might be intrusted to the Board of Public Works for facilitating the erection of piers, &c., and I took the liberty of suggesting, when the existing Act which constituted the Board of Public Works, the 1st & 2d of Will. 3. c. 33,

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was under consideration, a series of clauses which in my judgment, and I am satisfied, from the experience which I have had since, would have effected the erection of piers wherever there would have been found a necessity for them. My suggestions were to the effect of authorizing the Board of Public Works to advance for the erection of small piers, sums under 500 *l.* with the power of levying tolls for the purpose of maintaining those piers, and for the use of them, which the public would enjoy, I proposed that the piers should be leased to individuals at a moderate rent: such a rent as would be no bar to individuals taking them. That those leases should be on the condition that the rent should amount to a charge equal to from three to five per cent. upon the money expended.

840. Were those lessees to receive any tolls?—Yes, but they should be bound to maintain the works in an efficient state, and pay the rent sufficient to remunerate Government for the advances made. That the Board of Public Works should be authorized to fix and regulate the amount of tolls or charges, in order to prevent the possibility of individuals levying more than the circumstances of the case or the extent of trade might justify.

841. Would you propose that those leases should be for a short term of years, and then that the work, whatever it might be, should again revert to Government through the Board of Public Works, to enable them to improve or enlarge them, and in order that the public should have the benefit of those piers and harbours, according to circumstances?—That is a part of the plan I suggest, and I am satisfied had that been done, and power given under the Act, there would have been at this moment a sufficient number of piers on that river. The best illustration I can give of the necessity of such a power is, that for want of those clauses, the Steam Company I represent have been obliged to expend considerable sums of money in the erection of such piers, without which business could not be carried on. The evil of which is, that instead of public piers they are necessarily private property, and the Company are the owners of them; we shall of course require such terms from the public as we think advisable. I think it would be more for the interest of the public if those piers were public property and a moderate rate of tolls established. The evil of the present system, or rather the want of encouragement to the erection of suitable public piers and harbours is, that individuals are driven to the necessity of establishing private accommodation and necessarily exclusive, where the public interests require public conveniences.

842. Why would you limit the outlay to 500 *l.* from Government?—I should not think it proper, in consequence of the description of security which I suggest, namely, personal security, that it should be extended to large works, and for this reason—where the amount of the rent is small, personal security is perhaps the best security; better than land, because legal process connected with land is chargeable with a number of difficulties and circumstances which would render it impossible for the Board of Public Works to recover the rent with ease. The personal security of one, two or three solvent respectable persons would be the most available and the most general that perhaps could be obtained.

843. Do you think you could find a sufficient number of respectable individuals willing to enter into that security so as to answer the demand for quays and harbours on the Shannon?—I have no doubt a sufficient number of individuals would be found, because, wherever there is a necessity for such, that necessity would bring forward, as it were, the individuals competent and solvent for the consideration of the Board of Public Works.

844. Must there not be some outlay by the individuals themselves, or would the 500 *l.* be sufficient?—The expenditure of 500 *l.* or less on a harbour or pier would go a great way in the construction of a great number, perhaps three-fourths of all the harbours and small quays necessary for the navigation; but I would not limit myself to an expenditure of 500 *l.* only on any one work; on the contrary, I would say, where the owner of an estate or persons connected with trade were willing to expend a certain sum of their own, say one-half the required outlay, in that case the amount of the rent chargeable should be diminished, as an inducement for the expenditure of capital by individuals; for instance, suppose 500 *l.* was advanced by Government for a work which would require an expenditure of 1,000 *l.*, and the individual applying for the loan expended 500 *l.* of his own, I would, in that case, say the interest should be three per cent. instead of four or five.

845. How would they repay themselves for the outlay in that way if their leases were of short duration?—That would be a matter for the consideration of the persons applying for the loan of money.

 846. Might

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846. Might not, in that case, the tolls be high which they would require to be paid?—The fixing the amount of tolls should not be left to the option of individuals, as they would make the tolls as high as possible. The schedule of tolls should not be fixed except with the concurrence of the Public Board, so that there could be no possible inconvenience created to the public occasioned by improper charges for the enjoyment of the pier.

847. In the event of the Government and the individual each giving one-half, might they not have a joint interest in the tolls in proportion to their contributions?—Certainly such a provision might be beneficially arranged; but there should, in such cases, be a reciprocity, and Government should undertake to bear a portion of the loss, if any.

848. Is it not very desirable, in many cases, that the piers should be built susceptible of enlargement?—Certainly, a provision of that kind should form a part of the arrangement.

849. Is it not probable that enlargement would follow upon every one of them?—I think it is very likely the necessity for enlargement would follow as a consequence of increasing trade and intercourse.

850. Did it ever occur to you that it would be wise that the grand juries of the county should contribute one-half and the Government contribute the other half for the erection of these piers and harbours?—I think it would be injudicious to connect the grand juries with these works for a variety of reasons. The counties on the banks of the Shannon are extremely large, and it would be extremely injudicious to apply to the whole county for a portion of the contribution, because the great mass of the county would not have the advantage of the enjoyment of those piers. The advantage of the piers must necessarily be to a great extent local, though spread along the Shannon where there is such a deficiency of accommodation, and along its great length of 230 miles, or 460 of coast, as it were.

851. Would not the counties be much relieved in the way of roads by the general opening of the water carriage?—I have not a doubt of it; a good deal of the work which now goes upon the roads would go upon the water to the increased advantage of all parties.

852. Would it not be reasonable to give grand juries a power of preferring this water carriage as more accessible and a less onerous charge than the land carriage?—I have no doubt it would; but the question is, whether the grand jury would look at it in that point of view, brought together as they are from all parts of the country. I do not know one county on the Shannon where the grand jury would be likely to be unanimous in the advancing funds for what would appear to be a local or baronial advantage, although the benefit of the navigation would extend itself far into the interior of each county.

853. Would not that difficulty be got rid of by transferring it to the barony?—To a considerable extent, it would.

854. Would you recommend in that case that it should be so transferred?—Certainly, it would be advisable to give the baronies an interest in such works, and connect them with improvements of this kind.

855. You made an observation to the effect, that the water carriage would save the grand jury the expense of making roads; would that not involve the necessity of making roads to the piers built on the Shannon?—Admitting, from the situation of the Shannon, that it would be advisable to make roads in connexion with it, I cannot look upon it in a point of view as a necessary ingredient in the plan. I suggest the necessity for making roads in any direction is a matter of consideration for the grand jury. There are many instances where a very short road communicating between an extensive line of road and the Shannon would render a large district of country available to water communication. I know many instances of that kind, and where from want of an approach to the river, great facilities of trade and intercourse are unavailable and lost to the country.

856. Would it not in most instances be advisable that roads should be made connecting with the harbour and pier some other line or communication of road?—Certainly; the value of the harbour would only be produced by its connexion with the interior of the country.

857. How would you propose the roads to be made?—That portion of road incident to the use of the harbour might be connected with it, and the maintenance of that small portion might be part of the condition upon which the lessee of such harbour would take it.

558. Do you not in any instance propose that the lessee should expend any money

money of his own?—It might be advisable, as I have already stated, that the person who applies for the construction of the harbour should undertake to bear a portion of the expense, and as an inducement for him to do so, have proposed to lessen the rent charge.

859. Do you rely entirely on the rent to be received from the lessee as a security for the money expended by Government?—I do, and that rent should be equal to the charge of from three to five per cent. on the money expended, according to circumstances.

860. Do you think the resources of the country only want to be developed, and that they would present an ample security for the money to be so laid out?—Certainly. With respect to the necessity of the provision for making the piers and the power to levy tolls, I would mention the instance of Kilrush on the Lower Shannon. There is a small pier there, but there is no authority to levy tolls upon it, nor is there any individual charged with its maintenance; I allude to the pier in the inner harbour: the consequence is, that it is much exposed to injury and to be broken down; whereas, if there were any power to levy even an extremely moderate toll, it would be quite sufficient for its maintenance and almost constant repair.

861. Is there not a small toll now levied?—No; I am alluding to the old pier of Kilrush; it is a pier which is constructed of small materials, and when I was last there, it had received an injury from a vessel which 5*s.* would have repaired; it is very likely, however, inasmuch as there was nobody to expend 5*s.* on it, that the corner of the pier would come down, and in that case the entire mass would follow.

862. At whose expense was that pier built?—I really do not know.

863. Would you have these piers erected by the Board of Works, or by the lessees?—They should be erected upon a plan agreed upon by the Board of Works.

864. And under their direction?—Yes, and specification. I would leave to no individual the option of making piers on such plans as he thought proper; that part of the subject is, however, provided for by the present Act.

865. Where an individual was not called upon to advance the money, should you think it fair to the public that he should be enabled to derive an income at all from works of a public nature?—If he binds himself to pay the rent and maintain the work, he must have some means of remunerating himself.

866. Would you put up the lease to public competition?—Yes, at the expiration of the lease. There can be no likelihood of competition in the origin of the work. On application from an individual for the advance of a certain sum of money for the building of a work in any particular situation, the party applying should accompany the application with an undertaking to become the lessee, or procure one; not only is ample provision thus made for the useful investment of the money and construction of sufficient works, but a competent guarantee for the rent is at the same time supplied. I have no doubt the greater number of piers constructed would become a source of profit to the Board, were such advisable. They would have the power, at the expiration of the leases, of reletting them. There might be cases in which the situation of the pier might be such as not to induce persons afterwards to become the lessees, but those would be very few, and where they did occur, they would be amply compensated by the number of piers that would turn out to be profitable.

867. Then your object involves the idea that the proprietor should abandon all right to the soil after the expiration of the lease?—If he had not done it already as an inducement to draw the work to his neighbourhood, the person applying for the loan would of course require the Board of Public Works to appropriate the necessary land in the same manner as is at present provided for giving land for making a road.

868. Might it not happen that where the applicant was not the proprietor of the soil that the Board of Works, under the clauses which you propose, would have it in their power to give an income of perhaps 100*l.* a year to the party applying, while at the same time that person expended no money of his own upon the work? —The Board of Public Works would be the parties to protect the public; they have an interest in preventing individuals taking improper tolls, and it is their duty to take care that the amount of tolls levied be as nearly as possible sufficient to maintain the piers and enable the party to pay the rent. The case which has been put could only exist at the expiration of the term, the Board of Public Works would then have the enjoyment of the increased produce of the pier (supposing the pier to turn out profitable) on the reletting.

869. Would not the best test of the value of the pier be the amount which,

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upon public competition, was offered in the first instance as well as at the subsequent period?—I cannot understand the competition in the first instance at all; there might possibly be two applicants for the work, and if that was the case, then competition would arise, but were the amount of tolls found to increase, that would be the best proof of the value of the undertaking and the principal recommended.

870. If the application is to come in the first instance from individuals, what security is there that the quays and harbours shall be built in those places most convenient to the public?—The Board of Public Works would not consent to a loan unless they approved of the situation where the work was to be, and I conceive there would be an ample guarantee from this circumstance, that no individual making application to the Board would ask for a single shilling more than was absolutely necessary for the work, because he would thereby only involve himself in additional rent. Whenever a party conceived it desirable to place a harbour in a particular situation, whether he be the lord of the soil, merchant or other person, his interest would necessarily lead him to lay out the money to the greatest possible advantage, and to get the largest work and the greatest accommodation for the smallest advance, as the rent he would be charging himself with would be a rent commensurate with the expenditure. The leading feature of the plan I suggest is this, that while it would cause piers or harbours to be erected only in the most eligible situations, and where increasing intercourse would insure success, it would at the same time provide for the most judicious and most economical application of the funds advanced.

871. Would you require the execution of the works to be under the superintendence of the Board of Works' engineer, and the maintenance also under their control?—Yes, all should be done under their superintendence and control.

872. Is it not better that the works should be completed by the Board of Works, or leaving it to the discretion of the Board to say whether it should be done directly by themselves or by the individuals?—It is a matter of indifference by whom the work should be in fact executed.

873. Do you think the plan should be that of the Government engineer?—Nothing should be done except with the concurrence of the Board of Works through their engineer.

874. If I understand you rightly, your project is to this effect, that if the Steam Company Navigation wish to have a pier erected at a particular spot, you would give the Board of Works the power of taking the land from the proprietor and of leasing that pier out for a certain number of years?—Authority should be given for taking the land as is now provided for by the Act in the case of roads. Other persons besides the Steam Company would apply for the aid of piers. The owners of the land; the farmers, traders, &c. would be applicants for such aids to navigation, as they invariably increase the value of produce, as well as of land and houses, and improve all interests in the country.

875. Do you not conceive that such a power would be looked upon with great jealousy by the proprietors on the banks of the Shannon?—I would always give the proprietors of the estate priority; I would only allow the advance being made to an individual in the event of the landlord of the estate not being disposed to embark his money in the work or run the risk of its succeeding; I would always give him the option of doing it, or being the lessee in the first instance.

876. Then I understand from you, that if on an application being made by individuals to the Board, the Board approving of the plan, and the place where the quay and the harbour is to be erected, the Board would, in the first instance, give the option to the owner of the estate to perform the work?—Certainly; but in most cases the owner would most likely be the applicant.

877. And if not performed by him to the applicant?—Yes, to any applicant.

878. Would the erection of the pier under those circumstances involve the making of the road to approach to the pier?—It might or might not. The deficiencies of roads leading to the river, however, are very great.

879. Would you at the same time give to the Board the power of making roads contrary to the wishes of the proprietors?—If there was a necessity for such road, it would be a very insignificant one, being merely the connecting the next adjoining road to the water communication; but I would give the Board no new power as incidental to the working the clauses I would suggest as essential to the efficiency of the Act.

880. Suppose the next adjoining road should be several miles off?—Then there would be no application, for no man would apply for the construction of a small pier

pier when there was no road to it; that would be a question for the consideration of the grand jury in the ordinary way, and whether the road there would be advisable or not.

881. What objection do you see in empowering the Board to construct piers with the consent of the proprietors, and then to lease them by public competition in the first instance?—I see no objection whatever; it would be a most desirable mode of proceeding. I apprehend that the Board of Public Works have no authority to initiate a measure of that kind; if a power of that kind were given to the Board, it would be highly advisable, though it would not supersede the necessity of the plan originally suggested.

882. Do you see any objection to such a plan?—Certainly not; I think it most advisable. By the plan I suggest, however, there would be no applications for a pier unless where there was a manifest necessity for it, and the likelihood of sufficient trade to pay the rent and provide for its maintenance. No man would be fool enough to apply for a loan and make himself chargeable with the rent, unless he saw a reasonable ground for remuneration by trading intercourse.

883. In all those cases you propose the land to be vested in the Board of Public Works?—The whole work to be vested in the Board of Public Works; the land would be the mere spot on which the work would stand.

884. And compensation given to the proprietors of the land?—I would leave that to be done in the way in which ground for roads is taken. I would not interfere or introduce any new measure for compensation.

885. Are you aware of any individuals or public bodies that would immediately undertake the erection of such harbours and piers?—I am.

886. To any extent?—Wherever there was a likelihood of increasing trade there would be most likely applications for works of that kind.

887. Would your own Company undertake the erection of such piers and harbours?—They certainly would be applicants in a variety of instances for the erection of piers, and I have no doubt a sufficient number of persons would be found to become lessees, but one part of my plan is, that the applicants should be bound to procure lessees, or become so themselves. They have been obliged in three or four instances to purchase land and make private piers of their own, which I consider extremely injurious to encourage, inasmuch as they have thus the absolute right to them, and I think it would be more advantageous if they belonged to the public.

888. Has the erection of those piers realized your expectation as a mercantile speculation?—They are now only in the course of construction. I certainly would not have advised the expenditure, inasmuch as it was made upon my recommendation, had I not a strong conviction that they would repay the outlay. The return, however, expected is not in the way of tolls, but of an increased traffic to the boats of their establishment, and by which the country will be benefitted as well as the Company.

889. Do you think there is a reasonable promise of a return?—Yes, in the way I have mentioned, not in the way of pecuniary returns from tolls.

890. Where are those piers?—We have three on Loch Derrig, one in a place called Cow Island, now called Williamstown; the second at Garrakennedy; the third is at Turryglass.

891. What is the average cost of erecting those piers?—From 100*l.* to 500*l.* We have also on the Lower Shannon, or rather are about constructing one at Tarbert that will cost little short of 1,500*l.* I would much rather it should be a public one, but if we are obliged to make a pier at such a cost, it is unreasonable to suppose that we should make that for public convenience alone.

892. Would it not be inconvenient to limit the advance to the sum of 500*l.* on small piers?—It would be inconvenient, provided the Government was likely to accede to making grants on personal security to a larger amount. I limit the advance to 500*l.*, because it would be easier than to find tenants for small works, and to secure the amount of the rent reserved; but there would be great difficulty in getting tenants for works for a large amount, and which the Board of Public Works would approve of.

893. Have any of the landed proprietors made any difficulty to your building harbours?—None at all; in many cases they would make them themselves had they the means. I have had a great many applications from individuals holding land on the Shannon, entreating us to go there and erect piers or harbours.

894. Do you consider they willingly lent their consent to it?—I do.

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895. Without specifying any payment for the ground?—Yes; in many instances they would give the land as an inducement.

896. Have they given you considerable facilities in obtaining the materials also?—The materials are very plentiful every where.

897. Do you contemplate charging the public who use those piers with tolls?—We intended to levy tolls, but it is most likely the boats that come into those piers would be our own; where strangers come in we do charge a small toll.

898. Does all this apply to the Shannon?—The suggestions I make to the Committee apply to all the navigations in Ireland, and even to the coast.

899. Have you supplied any thing for the convenience of the persons resorting there, in the way of machinery?—We generally supply a crane.

900. Is there any extra charge to the persons who use that crane?—No, there is not; we have not made any charge for the use of our cranes.

901. In the case of those small piers, the expenditure of which is to be much below 500*l.*, the levying of tolls will require a toll receiver constantly resident there, which will be a considerable expense, besides the annual repairs?—Yes, but that will be done by the lessee, that is a matter for his consideration before he enters on the undertaking.

902. Will not that deter individuals from coming forward and applying for a grant for the purpose of erecting those piers?—I do not think the consideration of the expense of levying tolls will be sufficient to deter persons from coming forward and making application.

903. Will it not require such a toll as will raise the charge to the public much beyond the comparative value of the work?—There will be no pier without the necessity for that consideration on the part of the applicant; if the expected return from the work, either in the way of tolls or otherwise, be not sufficient to induce application for piers, the result will be that none will be erected.

904. Suppose a pier to be erected at the expense of 500*l.*, and 25*l.* a year would be the amount of the sum to indemnify the public for their outlay, the expense of collecting may amount to 20*l.* a year more, so that in point of fact 45*l.* will be levied upon the public to obtain an object which is caused by a revenue of 25*l.* a year?—That is the fact; but before an individual will make any application, he will take all that into consideration. I would, however, rather put it this way, that whereas 45*l.* must be received before the lessee would be remunerated, he must consider whether there would be sufficient trade and intercourse to repay him. It is not a question of grievance to the public, but of risk to the adventurer.

905. And such question has reference to the interest of the public?—The interest of the public is advanced, inasmuch as there would be a pier where before none existed.

906. Do you think it would be better for the public if only 25*l.* was levied in repayment of the money expended upon the pier?—No doubt; but with great respect I would suggest, that the object is to supply the deficiency of piers along this and all other navigations in Ireland where none exist, and upon the most economical terms, and without calling upon Government to give any thing; I might say upon terms that would really make it a beneficial project for Government. The terms I propose for adoption would enable the country to have an increasing accommodation of this description in all stations where now there is a deficiency; at the same time Government would be called upon to assist in doing this, they will not be called on to grant any thing for the expense, and the public will have advantages which they now want. The Board of Public Works have been in existence for some years, yet not a single application has been made for those piers, without which the navigation is useless; and not one has been erected on that 240 miles of double coast except what has been done by our Company out of their own funds. Five hundred thousand pounds has been granted for the purpose of Public Works and aids to the navigation, which were particularly intended should be supplied, yet not a single one has been constructed any where under the terms of the Act; and yet the whole of the 500,000*l.* is appropriated, and these most essential aids to intercourse, by which the population would be employed and trade and industry promoted, are yet unsupplied, and the clauses in the Act referable to them have remained a dead letter.

907. Do you consider the Act generally as very destructive of its own object?—Decidedly so.

908. Have you examined this Act passed in 1831, called the Public Works Act?—Yes.

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909. Does that Act, in your opinion, require amendment?—I think it requires amendment in many particulars.

910. State some of those particulars?—I think the great disease of the Act is, in the first place, that it lays too much obligation on the Board of Public Works as to the question of securities; it requires several descriptions of security which are not to be met with in Ireland, or at least are not available except at great inconvenience and great sacrifice on the part of individuals; I think there is not a sufficient discretion left to the Board of Public Works in recommending or selecting works, and with reference to their likelihood of satisfying the objects contemplated or intended by the Act. The whole consideration seems to be as to the security, the Board of Public Works have not the power of assenting to a loan of money, whatever their views of the necessity or value of the work may be as a means of promoting industry or trade, or relieving the great want of employment in Ireland. With respect to the application of small grants and loans, which in my judgment is of more importance, considering the state of Ireland, than large ones, towards those I think the Act is extremely defective. There are a number of clauses in the Act with respect to small loans, which from the particular manner in which they are framed have become wholly inoperative. There are also some clauses with reference to certain descriptions of security, which, from the manner the clauses are encumbered, have been equally inoperative; on the whole, I am quite prepared to say that it requires revision in many important particulars.

911. How is the Act inoperative as to the small grants?—From the manner in which the clauses are encumbered by the condition as to securities. I took the liberty of suggesting a variety of clauses, many of which have been introduced into the Act, but in such a form as to render them unavailable. Among other clauses I suggested, were some with respect to personal security being received, but they have been introduced with additions which have rendered them unavailable, and there has not been a single shilling advanced or applied for under them.

912. Have you got the clauses you proposed?—I have not them at present, but among them were the clauses 36 and 37, but there has been attached to those clauses the condition of repayment in five years, with interest at five per cent. No individual would ask for a loan upon personal security, rendering himself liable under a recognizance to the Crown, the most awful of all responsibilities, and with the knowledge of being liable to be called upon at the end of five years to repay it with interest at five per cent. The money could be had on much better terms any where else.

913. What time would you propose to be given for the repayment of the money?—That would entirely depend upon the nature of the work.

914. Then would you leave it to the discretion of the Board of Public Works?—Within certain limitations.

915. What limitation would it be?—I could lay down no general law; I should say it should be from ten to twenty years. The present Act contemplates repayment in twenty-five years, but when so heavy an interest is required at five per cent., no instalments of the principal should be required.

916. Would you extend it as far as twenty-five years?—I would not suggest the repayments of small loans being postponed for so long a period.

917. Are you not aware there is a power given by the Act to enlarge the time, if the Board thinks proper?—That is not with respect to these clauses. The Board have a discretionary power to enlarge the time of payment in certain cases.

918. But have they any discretionary power as to the rate of interest?—They have not, and this I consider a great defect of the Act.

919. So that an individual who could borrow money at four per cent. could not obtain a loan under this Act at less than five per cent.?—He could not, unless he had the means of offering such securities as were not likely to be offered for small loans.

920. What rate of interest do you think reasonable for the public benefit?—I think the rate of interest ought to depend, to a certain extent, upon the contingency of the party advancing money of his own; from three to five per cent. is the limitation I would state.

921. Is there any risk to the public in lending the money at the same rate of interest as Exchequer Bills bear?—There would be no risk; on the contrary, the lower the rate of interest the more secure would be the repayment.

922. Would you lower the rate of interest not only on the loans for which security is given on landed property but also on personal security?—I would not lower the rate of interest on advances given on personal security alone; where the

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whole money was advanced by Government, I think in that case the individual should be called upon to pay five per cent., because I think it is a fair consideration as the public advances the whole of the money; in this case, however, I do not contemplate a refunding of the principal, unless at the desire of the borrower, to discharge himself from so heavy a rate.

923. Do you think it would attain the object of the Act, which is the benefit of the public, by charging an individual five per cent. when the Government has it at three?—I think it might; the question of difference of interest would not be one of increased accommodation to the public, but of consideration by the applicant; the Government must, however, not overlook the risk of the loan, and which alone is the ingredient which would justify asking a higher rate than Government themselves pay.

924. Do you not think it would diminish the applications of private individuals giving personal security at a high rate of interest?—Certainly; and to lower the rate of interest would be to encourage applications, and *vice versâ*.

925. Do you conceive it would be a fair mode of dealing with those individuals, and tend to the benefit of the country, Government getting the money at three per cent. and lending it to the individuals at five?—I think the rate of interest, generally speaking, is too high, and particularly as it is higher with respect to Irish loans than in England or Scotland; for small loans, however, on personal security, such as I have been speaking of, Government would be justified in asking a higher rate of interest than they pay.

926. Is the personal security of so high a character?—The value of personal security in this case would depend upon the amount required; I consider a number of individuals for small amounts a good security; but I do not consider personal security sufficient of itself for Government where the amount is a large one.

927. Supposing you extend the time at which the parties should be called upon to pay that money?—The extent of time would rather tend to deteriorate the security.

928. You mean individual security?—Yes.

929. You have limited the personal security to 500*l.*?—Yes; but I have mentioned a class of cases where 1,000*l.* might be expended, the applicant advancing one-half of the money; there I think the interest should not be five per cent.

930. In all cases where the applicant undertakes to lay out any particular sum, do you there consider three per cent. sufficient, supposing the application was for 500*l.*, the applicant stating he was willing to expend 500*l.* of his own money?—I consider the rate of interest should be as low as possible to induce parties to expend money of their own; certainly not higher than three per cent.

931. Do you think three per cent. would be proper under those circumstances?—Yes; but I would wish to have it lower if possible; the expenditure by an individual on a work thereafter to become a public work is of itself such a contribution to the Government and the public service as to entitle him to the most favourable terms.

932. What security would you require in that case, where the moiety should be expended by the applicant?—I answer, personal security alone; the Board would take care only to grant one-half, upon the condition of the other half being expended as they now do.

933. Is your reason for thinking that an individual ought to be charged with a higher interest than a public body, that the security of the individual is less than that of the public body?—Yes; but public bodies cannot give personal security.

934. Individual security you mean?—Yes.

935. If the individual security be as good as what you call the corporate security, should you think the interest ought to be only three per cent.?—Decidedly.

936. Can you not conceive cases where individual security would be as good as corporate security?—Yes.

937. Would you not leave a discretion in the Board to determine whether in certain individual cases, the rate of interest ought to be three per cent.?—I think it would be a very invidious discretion to leave with the Board, to let the rate of interest be decided by their opinion of the solvency of individuals.

938. Do you not leave a discretion in the Board to determine, whether they would lend the money or not?—Yes.

939. If the loan then itself is matter of discretion, why not leave the consequence of the loan, namely the interest, also as a matter of discretion?—I cannot conceive the rejection of applications for loans is as invidious as making a difference in the rate of interest upon a consideration of the value of the personal security.

940. Do

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940. Do your remarks apply to the case of two or three persons of considerable personal security being joined in the bond?—I apply it to all such cases.

941. Will you have the goodness to state to the Committee your opinion as to the means of communication which the country has at this moment with the Shannon? Is it sufficient for the purposes of public utility?—The want of communication between the navigation and the interior of the country is manifest to an extraordinary extent. Except at the bridges, there are very few communications with the river on the western side of the Shannon.

942. Is not that position very remarkably elucidated by the condition of that part of the country, Clare and Galway, which adjoins the western bank of the Shannon?—It is, but not more so than on the Upper Shannon. I take the west side of Lough Derg, which may be said to embrace a coast of perhaps 40 miles; I do not think there is a single pier or place of trade or communication with the water in that distance; I do not know one, except one we made ourselves. In all those extensive bays and rivers which form so remarkable a feature in Lough Derg, they are all deficient in that respect.

943. In addition to the roads which you think will be necessary for the purpose of communication, would you not also propose a communication by means of canals and the tributary streams?—Certainly. There is a great capability on the banks of the Shannon for 200 miles of continuous navigation, and also by means of tributary streams, and they are all unemployed.

944. Are they all capable of improvement?—More or less so; several of them at a small expenditure might become the means of introducing water conveyance for many miles into the interior.

945. Will you name those tributary streams, the principal ones?—The Fergus is a very remarkable instance; the river Suck is another; the branch to Seariff, the Rossmore river, the Brusna to Parsonstown, the Cloonastra, the Inney, the Camlin, the Deel to Askeaton, the Maigue to Adaire. There is also the great navigation leading to Boyle, and many others. This latter is a very remarkable one, where I believe an extension of 40 miles of inland navigation might be effected at the expense of a very few thousand pounds.

946. Will you name the communications that can be made with advantage by canals?—There is one might be made with great advantage from the town of Roscommon to the water. I cannot name the places where canals are desirable, they are numerous.

947. Are there not two canals at present communicating with the Shannon?—There are those leading to Dublin.

948. Would you recommend the extension of those canals, or either of them?—I would not recommend the extension of the Grand Canal farther north; it already reaches Ballisnaloe; but the navigation by the river Suck, which runs parallel with it, might, at a much less expense, be carried to a greater extent into the county of Roscommon.

949. To what extent could the navigation of the river Suck be carried?—Mr. Rhodes has ably surveyed and estimated this extraordinary river, and has proved that at a moderate expense it might be carried 25 miles up the Shannon, towards Roscommon, for the sum of 35,000*l.*

950. That merely extends to one part of the country; would it not be desirable that the Grand Canal should extend to other parts, to Galway?—Certainly, and the further they go the more useful they are in every respect; the Grand Canal might be extended from Ballisnaloe to Loughrea with great advantage.

951. When you said you would not recommend the extension of the Grand Canal, you alluded to the expenditure for making that canal being so much greater than would be required for making the river navigable?—I prefer making the river navigable; but in my opinion it would be desirable that the canal should be extended. I prefer, however, making rivers navigable where the expense is not great, and the rivers are of sufficient size to admit of steam navigation.

952. Has your attention ever been directed to the subject of tolls?—Upon that subject I would beg leave to refer to my evidence before the Select Committee upon the Shannon navigation.

953. What powers do you propose to give to the Board of Public Works for the purpose of making these tributary streams navigable?—I would recommend the giving the Board of Public Works the discretion to initiate works of this kind; the parties there could do nothing of themselves, it must be done by Government, or with their aid.

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954. Do you think the tributary streams of the Shannon of sufficient importance to be included in any general measure to be brought forward for the purpose of the improvement of the river itself?—Unquestionably so, I consider it one of the most important features of improvement. The tributary rivers falling into the Shannon might be made to embrace an extension of intercourse of the most valuable character for more than 100 miles, independently of the great stream of the Shannon itself, which is 237 miles long.

955. How would you propose the money to be raised for that purpose?—As far as it was possible it would be advisable to induce grand juries to aid in these important works. I think in all cases Government should contribute, and at least grant a large portion of the funds; whether the remainder should be leviable by the grand jury on the baronies or counties at large, must be a subject of consideration hereafter.

956. You are favourable in all cases to the greatest encouragement being given to individual enterprise?—I am satisfied that what emanates from individual enterprise is more likely to be attended with a successful result in a commercial point of view; but in works of such magnitude, and which should be carried on simultaneously and on a combined and well-digested plan, individual enterprise or capital can effect nothing.

957. Are you perfectly convinced, from your knowledge of the Shannon and the tributary streams, that the improvement of the river and those tributary streams is not a fit subject for individual enterprise?—It is impossible any individual enterprise can be productive of any thing but very partial advantage. The object is so extended, and the work is of such magnitude, that it is quite out of the question to suppose individual enterprise will be available.

958. You propose that the money necessary for that purpose should be contributed partly by Government and partly by the grand juries or baronies?—I do.

959. Would you charge a portion of the expenditure on the tolls that might arise on the river?—The question of tolls for river navigation is a very important one. The reason I should recommend that Government be called upon to advance money in aid of such is, that the navigation should become a cheap one. If the traffic was subjected to a heavy toll, it would defeat its own object. The effect of making it a dear navigation instead of a cheap one would entirely defeat the great object which Government should keep in view, namely, the increasing internal intercourse by water, and in which Ireland is so lamentably deficient.

960. With a view to the proper maintenance of the navigation, would it not be desirable that a power should be given of raising tolls upon the line?—I think it would be injudicious not to authorize the Board of Works to collect a toll, but it should be merely for the purpose of maintenance.

961. Then in the course of a certain number of years is it not more than probable that those tolls would go a certain way towards repaying the expenditure upon the navigation?—The expenditure would be so large upon the main trunk of the river that I am afraid no tolls would ever be sufficient to remunerate Government for the advance. The great object of Government being the improving the condition of the population, they should rather look for a return of the principal in the increase of revenue arising out of the moral elevation of society, and improved habits of the population.

962. Do you not think after a period of 25 years, that the traffic would be much increased?—It would certainly and in a much less time; but I think it would be very injudicious to adopt any measure that would make it an expensive navigation.

963. You think that would crush the trade in the bud?—Yes, it would prevent the trade ever being formed, and by checking intercourse would necessarily check the progress of those ameliorations which follow so invariably.

964. If there was a toll, to what object would you apply the toll?—To the maintenance of the work alone.

965. You would confine the toll to the expenditure necessary for the maintenance of the work?—Yes.

966. Has any instance fallen under your observation, in which a great return has arisen from the expenditure of money upon public works?—Yes, in consequence of the money expended by Government in the western and southern districts; in the course of seven years on roads the annual increase in the customs has been more than equal to the entire expenditure, which was about 170,000 *l.*

Lunæ, 13° die Aprilis, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Charles Wye Williams, Esquire, called in; and further Examined.

C. W. Williams, Esq.

13 April 1835.

967. HAVE you condensed your ideas respecting the erection of small harbours and piers?—I have, and the suggestions I would make are to the following effect:—

That the Board of Public Works be empowered to advance, by way of loan, any sum not exceeding 500*l.* for any pier, harbour or approach to the same, or other work intended to facilitate inland navigation, provided that such pier, harbour or other work shall be thenceforward considered a public work, and be open to the public on such terms as the Act should direct.

That when the proprietors of the soil or other person or body make application for the advance of money for the construction of any such work, the Board shall not accede to the same unless on the undertaking or tender of one or more solvent and approved persons to become tenants or lessees of such work on terms as hereafter.

That where the applicants for such advance undertake to expend of their own proper monies a sum equal in amount to that to be advanced by the Board, in that case the reserved rent payable by such lessee to Government to be a sum equal in amount to a charge of three per cent. on the moiety so lent or advanced by the Board.

That where the entire sum necessary for the construction of such work shall be advanced by the Board, in that case the reserved rent to be in amount equal to a charge of four or five per cent. on the sum so advanced, according to circumstances, giving a discretion to the Board, on view of the importance of the work.

That the conditions of the lease so to be granted under the authority of the Board shall be, that the lessee maintain such work, during the term of the lease, in a satisfactory state of repair, the operation or injuries arising from floods or storms excepted; and that he be empowered to levy and receive certain tonnage or other rates on such boats as should avail themselves of its aid in return for the enjoyment of such work by the public, and for the maintenance of the same; the Schedule of rates to be approved of by the Board and published.

That leases for such works be for terms of not less than five nor more than ten years.

That on the expiration of the term agreed on, the Board of Public Works be empowered to re-let the tolls by public bidding (or other public mode), due regard being had to the solvency of the parties and other circumstances, giving priority alone to the original proposers or lessees; and that the Board be also empowered to vary the Schedule of tolls on any such re-letting.

That the Board shall determine under what rules and regulations the lessees shall occupy and enjoy, or the public have the use of such work, pier or harbour, &c.

That power and authority be given to enforce the payment of such tolls or rates, and to protect such work from trespass and abuse.

That where the establishing or maintaining any beacons or buoys, the dredging or keeping open any passage or approach to the same, or any other aids to the navigation may be essential, the Board be authorized to embrace such necessary objects in the condition of the lease.

968. Would you give power to the Board of Public Works to initiate any and what works in Ireland?—I think it would be extremely advisable that the Board of Public Works should be empowered to initiate measures tending to increase inland intercourse, either by land or water, I mean such as come within the class of what may be called small works. I would not give them the power of initiating large works, but for anything under 1,000*l.* it would be very desirable the Board should have that power. They have now no discretion whatever.

969. What description of works do you allude to?—Short lines of road leading to navigations; improvement of navigations and construction of small piers and harbours, and the general class of works that would improve the intercourse of

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the interior and develope its resources, thus creating new sources of industry and employment.

970. Would you limit their power to any specific sum?—I would limit their power, because I think it would be wrong to give them the power of initiating such measures as might involve large expenditures, under the strong conviction that it is not by such, but by multiplying the numerous aids to intercourse and interchange of commodities, and which come within the scope of small expenditures, that the country is to be benefited.

971. How do you propose that the money should be provided for the expenditure of works so to be commenced by the Board of Public Works?—I think, on the announcement of such measures being in contemplation, and the Board of Works taking measures to give publicity to them, there would be qualified persons in abundance ready to undertake those works upon such terms as the Board or a new Act might point out.

972. What do you mean by the Board of Public Works initiating them?—By authorizing their surveyor or county surveyors to suggest and examine situations where such works might be desirable; to prepare the necessary surveys; to relieve individuals from that great expense; providing for permission to enter lands for the purpose of making those surveys, and obtaining the necessary land in the same way as is now provided for in cases of roads, and also for making plans and estimates, and to show to the Board the facilities with which these works might be accomplished and the effects that would follow. I know several works now in progress, which, if such power had been vested in the Board, would have originated with them. By their not having this power, it devolved upon individuals to make those works for their own convenience, and the consequence is, that those works became private instead of public property.

973. Are there many works for the want of such a power that have not been undertaken at all?—There are a very great number, and without them it is impossible inland intercourse can prosper or indeed exist. What use can a navigation be without approaches and landing places?

974. Would you give grand juries the power of raising money for the purposes of any of those works to which you have now alluded?—It might be advisable that the Board of Public Works, upon the recommendation of their engineer, and with the consent of the Treasury, should make it compulsory upon grand juries to advance a certain portion of the necessary expense; but inasmuch as the advantages derivable from those small works would be necessarily local, the great body of the county represented by the grand jury would not be disposed to promote the work, and this is the reason why grand juries are bodies ill constituted and unlikely to initiate valuable small works or aids to intercourse.

975. What portion would you say grand juries might be required to supply?—That to a great extent would depend upon the nature of the work. I would not like to name any portion; I am alluding to the class of small works, and where individuals may supply a part of the expense.

976. Would not grand juries object to such a compulsory power?—Some might object, but as the works are of the class in which but a small expenditure would be necessary, if the grand juries could have the power of throwing the expense upon those baronies which would be most interested in their erection, I think there would be no great difficulty in inducing them to consent.

977. Would you in any case give compulsory power where Government did not advance one half the expense?—No, I would not.

978. And would you not add where an individual gives something less?—I think that might be left to the discretion of the Board of Public Works; where an individual would be very much benefited by it, I think it fair that the grand jury and Board of Public Works should call upon the individual to bear a portion of the expense, or make that a part of the condition on which they would proceed with the particular work in which they should take the initiative. With respect to the class of works that I have alluded to, I would observe that roads, and even mail-coach roads, often run within a short distance of navigations, yet are wholly inaccessible to them. Districts of twenty or thirty miles are frequently met without any landing place or shipping accommodation of any kind; and Mr. Nimmo, in his evidence before the Lords' Committee of 1824, observes: "The Shannon has been made navigable into Lough Allen, but it is remarkable that upon the western coast of the broad parts of the Shannon we have not a single landing place." I find that from the sea to Lough Allen there are not more than eight available landing

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landing or shipping places in connexion with lines of roads, although I estimate it to be equal to a coast of 469 miles, viz. C. W. Williams, Esq.

	Distances in Miles by Water.	Length of Coast in Miles.
The Sea to Limerick.—Without any pier, harbour or convenience for shipping, or landing goods, except one at Kilrush, and one at Clare	60	150
Killaloe to Portumna, through Lough Derg.—This distance includes several deep bays stretching many miles inland, yet without a single public shipping quay	24	90
Portumna to Banagher.—At Portumna Bridge there are two small harbours belonging to the Grand Canal Company, for the use of which a heavy toll and wharfage is payable; no harbour or landing-place, or even approach to the river between these towns	12	24
Shannon Bridge to Athlone.—No harbour, landing-place or approach to the river between these towns	18	36
Athlone to Lanesboro, through Lough Rea.—This distance comprises many deep bays and inlets, and a very extended coast, and several tributary rivers running into the same, but without a single harbour or trading convenience, or even approach to the river	21	55
Lanesboro to Rooskey.—With the exception of the Royal Canal Harbour at Tarmonbarry, where however tolls and wharfage are payable, the same deficiency of trading accommodation or approaches to the river exists	17	34
Rooskey to Drumsna.—This distance embraces several small lakes and bays, but all wholly destitute of trading accommodation	10	30
Leitrim to Head of Lough Allen.—Several miles of this distance is not navigable by the river; a canal and locks however have been constructed by the Government Board of Inland Navigation, but which for many years have remained in an imperfect and dilapidated state. The entire distance is without any landing-places or trading accommodation	20	50
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This enumeration is quite sufficient to prove the necessity for Public Works on this navigation. This was not unknown to Government, as the works on this river have been under the immediate direction of a public Board for the last 30 years. Yet the Act constituting the New Board of Commissioners has been formed without any regard to the state of this river, or even the maintenance of the Public Works on the same, and in their own hands.

979. Would you add any thing to what you said the other day about the tributaries of the Shannon?—I would observe, it would be impossible to detail the numerous situations where advantage may be taken of the deep water bays and rivers connected with the Shannon. Both are to be met with in great numbers and possessing extraordinary capabilities. I already mentioned the river Fergus to Ennis and Clare; the river Deel to Askeaton; the river Maigue to Adaire; the branch of the Shannon to Scariff; the Rossmore river, leading to Woodford, in Galway; the Brusna to Parsons town; the river Suck, in the county of Roscommon; the Cloonastra; the Inny, to Ballymahon; the Camlin, to Longford; and the lakes and river towards Boyle.

980. You have not included the Carnadoe in your enumeration?—I have not; but I consider that as connected with a large bay on the western side of the Shannon; Mr. Rhodes did not survey that river.

981. You have not noticed the canal communications, which might be made with the Shannon?—I have not, because they are so numerous; but I may mention a few: one from the town of Roscommon to the Shannon; one from Lough Rea, to the town of Ballinasloe; one from Ennis to Clare; one from Ballymahon, to the river Inny; one from Nenagh to the Shannon.

982–3. Would not such undertakings be of great benefit upon the general principle in all navigations?—Pushing into the interior of a country, would always be beneficial on principle; and I am satisfied it would be so in the cases enumerated.

984. Are you acquainted with Lough Gara and Lough Mask?—I am not. There has been a line of navigation surveyed and recommended in that direction; also a branch from the Grand Canal, at Ballinasloe, to Lough Rea; but that was not connected with the navigation of the Shannon.

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985. When you talked of the erection of small harbours and piers, did you confine it to rivers or extend it to lakes?—Nothing would be more judicious than connecting the lakes in the western district, and bringing them also into connection with the Shannon.

986. How is that to be done, except by means of a canal?—It can only be done by means of short lateral canals, and by improving the rivers that connect those lakes.

987. Then you would erect small piers and harbours on the borders of the lakes as well as upon the banks of the river?—On all navigations, whether canal or river, or lough, without those aids to navigation, I conceive, and I can speak from experience, it is impossible to carry on a useful intercourse with the interior, or to render those or any other navigations available.

988. Have you examined the Public Works' Act in reference to the power thereby given to the Board of Public Works to advance money for the purpose of drainage, and the improvement of lands?—I have; and I think that that Act is susceptible of great improvement; at present it appears to me that the clauses which have reference to the drainage of lands have been wholly inoperative; and I am disposed to think that that is attributable to the severe terms which those clauses contain. One condition, which I would suggest to be altered, is that which involves the repayment of the advances in the short space of three years, a period quite insufficient to render the drained land profitable. There is also a necessity imposed by the Act for payment of interest at the rate of five per cent.; terms which I conceive too onerous to induce any individual to apply to the Board of Public Works for a loan for such purposes.

989. What alterations would you therefore propose to be made in the Act?—I would extend the term of repayment: at the same time, I would suggest that when so high an interest as five per cent. is exacted, while Government are borrowing at three per cent.; as long as that interest is paid, no instalment on the part of the principal should be exacted.

990. Would no part of the five per cent. be applied by you in liquidating the sum originally borrowed?—I think five per cent. may be fairly considered as involving both interest and repayment of principal. I would consider it in the proportions of three per cent. for interest, and three per cent. as a sinking fund for repayment of the principal. These are the terms on which the money for the improvement of Leith harbour has been borrowed.

991. Would you consider that five per cent. in the shape of a short annuity, and only payable for a certain time, or payable until the whole principal is liquidated by means of the sinking fund?—It would be necessary that the whole principal should be liquidated unquestionably, but I think that five per cent. would be sufficient, considering it on the foot of a liquidation of the whole; and it must not be forgotten that Government would derive great benefit, and reap an abundant pecuniary return in the improvement of the revenue, by the increase of intercourse and trading.

992. Are there not certain works under the control of the Board of Public Works in Ireland?—A large portion of the river Shannon is at present vested in Government and under the management of the Board of Public Works. No provision was introduced into their Act authorizing any expenditure for maintaining those works; the result is, that they necessarily remain in a continued state of dilapidation: the locks decaying, the canals filling up, the fords impassable, and the whole of this important part of the river reflecting great discredit on Government, and this while the navigations in Canada are perfected and maintained at an enormous cost.

993. Are there no other works also under their control?—There are other works in the north of Ireland, but what state of repair they are in I am not prepared to say.

994. How many miles of the Shannon are so under their care?—All the Shannon above Athlone, embracing a continuous navigation of at least sixty-two miles to Lough Allen. The whole of Lough Rea, Lough Derg, and the other lakes are also under them, as also the navigation of the Maigue to Adaire, on the lower Shannon.

995. In your opinion, means ought to be afforded them to keep up those works?—I do, otherwise there can be no means of rendering that navigation available, inasmuch as private companies could not be established for the improvement of the navigation, which was in the possession of Government; and it should be observed, that those sixty-two miles may be considered as the most important portion

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portion of the river Shannon, running through a very fine country without any other outlet to the sea, and running, as the river does, through the centre of Ireland.

996. Do you think, that under the existing provisions of the Act, considerable difficulty of a legal kind has been experienced by parties applying for loans?—The principal legal difficulty arises out of the necessity of conforming to the condition of the Act as to securities; the difficulty of finding that description of security which the Board of Public Works are alone authorized to take.

997. What alteration can you suggest?—A modification of the class of securities. I would suggest that there be introduced into any amendment of the Act a Schedule embracing forms of proceeding, forms of mortgage and other securities, to prevent the heavy expenditure of law costs, which are now required though not necessary, and which have been a source of considerable complaint upon the part of many individuals.

998. Must it not be necessary to have some special covenant or contract?—All that may be introduced into the Act by way of Schedule, as is the case in many Acts.

999. Can you provide for every case, do you think?—Where any special case may arise that may require any special provision, that may be introduced into the agreement.

1000. When public bodies mortgage their tolls, the work being partially finished, might it not be necessary to introduce a specific provision into the mortgage deed which had reference merely to that particular work?—That I believe is already provided in the Act.

1001. Has not a large sum of money been advanced to the Ulster Canal Company?—I understand that 120,000*l.* is to be advanced.

1002. By whom?—By Government.

1003. At what rate of interest?—At a rate much less than loans are granted by Boards of Public Works, namely, at three and a half per cent. with an extended repayment as far as 25 years; the repayment only to commence at the expiration of five years.

Mercurii, 15° die Aprilis, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *John Fox Burgoyne*, called in; and further Examined.

Colonel J. F. Burgoyne.

15 April 1835.

1004. ARE you now prepared with an account of the actual expenditure upon Government roads in Ireland under the management of the Board of Public Works?—I am, for the last year; and I request to add a few explanations with reference to the system adopted in Ireland, and more particularly in comparison with that which has been stated to work well in the Highlands of Scotland. The very great benefits which the Highlands of Scotland have derived from the Parliamentary roads, and the perfection to which the system of management has by degrees been brought, has naturally and very properly turned the minds of the Committee to a comparison with the works having the same object in Ireland. Some explanation is necessary to account for the difference that is supposed to exist in the cost, as well of management as of these repairs. I may be allowed to remark, that nothing can be more delusive, and at the same time nothing is more common in Ireland, than to endeavour to adopt fixed standards for the cost of work, without regard to circumstance or situation. Very many grand juries find, that roads in certain parts of the country are maintained in tolerable good repair at a given rate, and immediately form a resolution that they will allow no more in any part; while it is manifest that for one situated favourably in respect to its foundation, facility for procuring material of good quality, and having little traffic, the expense may be not a quarter what is necessary for another under different circumstances. This system must lead to unreasonable advantages in some parts, and to fair grounds for complaint in others which are less favourably placed. It also tends to a certain degree of evasion and consequent demoralization, an instance of which once came before the notice of the Board. In the course of investigation of a project for a new road, with reference to a loan sought for, it was found that the price allowed for masonry was less than it could be done for; but the quantities being in excess, and the aggregate amount of the estimates adequate, the loan was sanctioned. On pointing out to the engineer who drew up the project these inaccuracies for correction, he

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he frankly confessed that the grand jury having made a rule only to admit the rate per perch for masonry which he had introduced, it was needless his attempting to ask for more, although he knew it to be inadequate, and therefore he had made up

RETURN of the GOVERNMENT ROADS in *Ireland*, under the Charge of the Board of

DISTRICT.	COUNTIES.	Number of Miles in each County.	Total of Miles in each District.
		M. F. P.	M. F. P.
Central District	Clare	92 1 –	121 1 –
	Galway	12 – –	
	Limerick	17 – –	
Southern District	Cork	88 2 –	155 6 –
	Kerry	52 2 –	
	Limerick	15 2 –	
Anglesey Roads	Tipperary	41 1 27	41 1 27
	Roscommon and Leitrim	11 4 8 3 6 22	15 2 30
Western District, Northern Division	Mayo	111 2 2	111 2 2
Western District, Southern Division	Mayo	16 – –	137 – –
	Galway	121 – –	

Excluding those of Galway and Mayo, which have not been an entire year in operation, they will find the aggregate number of miles in charge to be very nearly 334; the expenditure, including establishment, 5,255*l.*, being about 15*l.* 10*s.* per mile, or less than 1*s.* per perch; without the establishment, 4,357*l.*, or about 13*l.* per mile, that is nearly 10*d.* per perch, and the establishment itself, including travelling and all charges, 898*l.*, that is something under 2*l.* 14*s.* per mile. The average expense for repairs on the Highland roads is stated by Mr. Rickman to be about 7*l.* per mile, something more than half that of the cost in Ireland, which is about 13*l.* per mile; but the Committee, on comparing circumstances, will readily perceive legitimate cause for that variation. 1st. The difference in the numbers of the inhabitants, the Highlands of Scotland being the most thinly inhabited of any part of the British empire; while in Ireland, and even in those parts now under consideration, the population is very dense, and not only dense, but the greater part in a state of destitution, and want of work so pressing, that immediate advantage is taken of the access thus opened to very improveable tracts of country to cover the roads with cars and carts in strings of 20 and 30 at a time, conveying lime, manure, &c. &c. into the hitherto wastes. In the Highlands this process is also in operation, but in an infinitely smaller degree, by the occasional passage of a few of the small Highland cars conveying from 3 to 10 hundred weight, and drawn by the very small ponies of the country. In Ireland also these roads form in many instances leading lines of communication between places of great traffic and resort, as between Cork and Killarney, and Limerick and Killarney, &c.; the difference on the whole may be assimilated to a comparison between the traffic on a high road out of London with one 50 miles out of it. Mr. Loch states some of these roads in the Highlands to be only 10 or 12 feet wide, while in Ireland so little as 16 and 18 feet are only admitted in very extreme cases, and the Board have recently excited a considerable degree of animosity on the part of the gentlemen in the country, because they cannot make one of these grant roads more than 21 feet wide. 2d. The roads are, generally speaking, much narrower, as above remarked. They are almost universally without fences, and generally on a hard dry soil, while a great extent of the Irish roads are over bog, requiring, of course, greater attention to draining, more surface material, and very careful watching. The road materials are more handy,

of

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up the difference by adding to the quantity. By the Return which I now lay before the Committee, the honourable members will perceive the expenses for the last year on the Government roads under the management of the Board.

[*The Witness handed in the Account.*]

PUBLIC WORKS; showing the Expenditure on them during the Year 1834.

ESTABLISHMENT.	EXPENDITURE in 1834, in each District.								
	Labour and Material.			Salaries.			Incidents.			TOTAL.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
1 Superintendent, 150*l.* per annum 1 Pay-clerk, 75*l.* per annum 2 Overseers, 13*s.* per week 6 ditto, 10*s.* per week	2,152	4	6	329	12	–	31	1	9	2,512	18	3
1 Superintendent, 183*l.* 16*s.* per ann. 1 Pay-clerk, 75*l.* per annum 1 Overseer, 15*s.* per week 11 ditto, 10*s.* per week	1,473	8	3	407	16	–	48	15	1	1,929	19	4
1 Supervisor, 15*s.* per week 1 Pay-clerk, 12*l.* per annum	558	10	5	51	–	–	3	14	–	613	4	5
1 Superintendent, and Pay-clerk – 26*l.* per ann.	172	18	4	26	–	–	–	–		198	18	4
1 Superintendent, 105*l.* per annum 1 Pay-clerk, 40*l.* per annum 1 Inspector, 30*l.* per annum	1,309	14	8	*114	10	–	64	7	4	1,488	12	–
1 Superintendent, 105*l.* per annum 1 Pay-clerk, 40*l.* per annum	1,698	3	11	*122	8	9	78	17	11	1,899	10	7

* These salaries are only for a portion of the year, as the Works had not commenced until March 1834.

of a quality perfectly adequate to the traffic, and are dug up loose, of decomposed rock or gravelly shingle, requiring nothing but screening to be fit for immediate use. It is rare to have recourse to carring and breaking the stone as in Ireland, where attempts to employ gravel or inferior material has been found quite futile, owing to the great intercourse upon it. Thus the amount of traffic, the dimensions, the foundation and material, are all the sources of additional cost in Ireland. I do not think, taking every thing into consideration, that the average expense now incurred is unreasonable, or that it can be expected to be reduced. This may be considered in some degree confirmed by a recent occurrence. The road in Roscommon, about the expenses of which the grand juries have made complaints, has now been placed by the Board under charge of the county engineer, and the lowest terms on which he has been able to obtain a contractor for it is at a higher rate than it has cost for the last three years under the Board. It will be said, perhaps, that it was not kept in good repair. I feel confident in asserting, from the reports of various engineers who were sent expressly to find fault wherever it was due, that such was not the case, speaking of its general state for travelling, nor is there a single road in Ireland, under charge of the Board, that is not in very superior condition to that of other roads in the same district. The great objects of the Board are, 1st, that the roads should be kept in thorough good substantial repair, and, 2dly, to have that done at the smallest expense consistent with a reasonable remuneration to the people employed. With respect to the relative cost of management and superintendence, it appears that the salaries of the superintendent and inspectors on the Highland roads amount to near 1,000*l.* per annum, but that is independent of travelling charges; that must form a considerable item of the expenses of Mr. Telford, or chief directing engineer, and of incidents. It is probable that Mr. Rickman's general statement of 2,000*l.* a year for management covers those items, being at the rate of 2*l.* per mile. The cost in Ireland, as exhibited on the return, is 2*l.* 14*s.* per mile; but it is made up in a different system, which will be far from showing any want of economy in Ireland. In Scotland, it appears these roads are kept in repair, under general contracts, at low rates, a very small degree of labour and materials being requisite, and the duty of the superintendent and inspectors simply to visit and see that they are in proper condition;

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the work admits of little variety; the first few inspections establish what is required; the contractor is paid periodically and in mass, and the system, no doubt, works with ease and success. In that country the affairs of society are perhaps under as regular and perfect organization as any in the world; but in Ireland, and particularly in the remote parts, there exists a spirit of demoralization, or rather a false system of society, that renders peculiar caution necessary in the employment and payment of the labouring classes. The system of general contracts for keeping the roads in repair has been tried on over and over again, without effect; except in a very few instances, where it is still in force, it was found impossible to enforce due attention to the work: the rates demanded were high, the roads were out of order, and of course eternal disputes existed with the contractors, while another very serious evil was of constant recurrence, namely, that these contractors, whose agreements were founded on calculations of reasonable prices, would frequently take advantage of the necessity of their poor neighbours to exact labour from them at miserable pittances. The result of my experience has shown that the best system for the current patching and repairs is to procure the material, broken or unbroken, by contract, and delivered (at per given weight or measurement) as required, and for spreading, attendance to drains and fences, and other operations, to employ day-labour under working overseers. It has also been considered most necessary to ensure an accurate, regular and frequent money payment, for which purpose, in all cases that would bear the expense, a pay-clerk is employed, independent of the person in charge of the works; they afford consequently a mutual check upon one another. The pay-clerk forms an important feature in our expenses, add to which the detached position of many of our roads, the larger expenditure as explained above, and the consideration that our overseers, shown on the establishment as receiving 10*s.* to 15*s.* per week, are working men, who, when not having a gang under them requiring all their attention, perform themselves little jobs, such as opening drains or patching a small hole, &c., and the expense of management is any thing but costly, or not bearing comparison with that of the Highlands. On this I could rest as a satisfactory explanation; but I will not deceive the Committee by taking advantage of the present favourable moment for making a comparison, but will confess that we have not been sufficiently liberal to the officers in charge of those works, and that we have it in contemplation, as an act of justice, to increase their allowances. Some of them are gentlemen of considerable acquirements as engineers, and have extensive districts, which they manage ably, zealously and conscientiously on salaries and travelling allowances not much exceeding 200*l.* a year. As the roads in charge of the Board increase, as they are doing rapidly under the operation of the grants, we shall have occasion to alter the arrangements, and in so doing, shall always study efficiency and economy.

1005. When was the first road under Parliamentary grants commenced?—I am not aware of the particular period; but it is many years ago, 14 or 15 years.

1006. The roads in Scotland commenced at a much earlier period?—Yes, a much earlier period, 1803.

1007. Is not the expense of maintaining and repairing a new road much heavier than the expense of maintaining a road well established, the foundation of which has become well settled?—It is necessarily more expensive, even if the road had been originally of this construction. There are always some works left to be added in the shape of drainage, and more particularly in the application of broken stone, which, if laid on all at once, would render the draught so heavy as to make the road nearly inefficient, for which reason it is customary to apply about half the quantity, and to work that down in the first few years, and then to add to it in much greater proportion, which is the usual common current of affairs on an old-established road.

1008. Is it not almost impossible to offer any fair comparison between the expense, the economical management rather, of different roads, when you consider that upon the great Holyhead line of road the expense probably of one part is ten times as great as the expense of other parts, though the road is kept in exactly the same state of repair throughout?—It is impossible to adopt any general line of comparison when it depends upon so many circumstances of situation and traffic.

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Peirce Mahony, Esquire, called in; and Examined.

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1009. YOU are a solicitor in considerable practice in Ireland?—I am.

1010. And you have been so for many years?—Twenty years.

1011. Where at?—I reside at Merrion Square, in the city of Dublin.

1012. You are also acquainted with different parts of the country, particularly the rural parts, and possessed yourself of land property in Ireland?—I am, generally speaking, acquainted with almost every district in Ireland, and I am possessed of some estates in the southern counties.

1013. Have you read the Act passed in the year 1831 for the extension and promotion of Public Works in Ireland?—Yes; and I have been engaged professionally in obtaining loans under that Act; I mean upon the part of those who sought the advantages of it. At the time it was in progress through Parliament, I took a very active part in its details. I made many suggestions and objections to the details; several of them were attended to, others rejected; the ground of objection which I urged most strongly, was that the rate of interest required from Public Companies, &c., under section 30, would be found too high, and that the interest of five per cent. for loans to landed proprietors, intended for the encouragement of improvements on their estates in Ireland, would render that part of the Act almost nugatory.

1014. You mean that part of the Act for encouragement of drainage and other improvement of estates in Ireland?—Yes; and while that Act was in progress through Parliament, I took the liberty of urging upon the promoters of it, that from the condition of property in Ireland, and the omission of certain authorities and provisions in that Act which I had suggested, the legal impediments would be found too great and too numerous to admit of its principal object—"the extensive employment of the Poor of Ireland, and the encouragement of Works of Public Utility," being carried into effect. The experience we have had of the operations of the Commissioners under that Act, justifies the opinion I then entertained; as, notwithstanding the admirable discretion and zeal of the Commissioners, and the anxiety of the people of Ireland to avail themselves of the advantages intended for them by the Legislature, the Committee will find by the report presented for this Session to Parliament by the Commissioners, and circulated this day, that only two loans have been made throughout Ireland to private individuals for the purposes of that Act; and I consider that if the terms upon which the Commissioners are authorized to make such loans were ever so favourable (and I regret to say that they are, in my judgment, the very reverse, and particularly so if we compare the conditions of such loans under sec. 32 of the 1st & 2d Will. IV. ch. 33, namely, at not less than five per cent. interest, the principal money to be repaid at all events within seven years from the date of the advance, and in all cases within three years from the completion of the works specified in that section—with those contained in other Acts, and especially the 3d Geo. 4. ch. 112, sec. 3d, by which a bounty of 24 per cent. (being four per cent. per annum for six years) is secured for any sum of money which individuals might advance towards making or repairing roads, railways, bridges, canals, navigations, embankments, drainage or harbours, or to the support of any fishery, colliery or mine, or *any other Work whatever, either in their own private capacity, or in aid of any Public Company*; also the 1st Geo. 4. c. 81;) yet the legal impediments standing in the way of the Lord Lieutenant, the Commissioners and the public are so great, that in 99 cases out of 100 I should consider it a waste of time and money to make application for a loan for the purpose of drainage, embankment, reclaiming, and other improvement of land. The persons who require the aid of the Commissioners, generally speaking, have their estates encumbered or under settlement; thus they are without the means of procuring money from private capitalists; and yet, while they should be the class peculiarly favoured on account of their position, their debts and settlements (the source of their inability to deal with private persons) are allowed to remain equally an absolute bar to any arrangement which the Commissioners might (in order to promote the policy of their Act) be disposed to enter into.

1015. Have you experienced that the rate of interest has proved an objection, nay, an obstacle to the borrowing of money under this Act?—I consider, that if the rate of interest was lowered to the standard at which it has been established both in England and Scotland, or even at 3½ per cent., as in the case of the Ulster Canal Company, upon their loan from the Commissioners for Public Works in England, the objects contemplated by the Legislature would be more speedily and effectually attained. Impressed monies, at the disposal of the Barons of the Exchequer in Scotland, (mentioned in the 59th of Geo. 3, ch. 135, under which the Highland roads and

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bridges in Scotland were repaired,) have been lent at three per cent. interest and two per cent. sinking fund to the Leith Harbour Commissioners and others. If that scale was substituted for the one existing in Ireland, and I know of no sufficient reason for giving increased facilities through the aid of the Imperial credit of the United Kingdom to Scotland or England beyond that which should be given to Ireland, the greatest possible advantage would flow to the Empire generally, from a speedy development of the resources of Ireland, and even by the direct advantage which would arise to the Exchequer of the Empire by an increase of revenue from that country.

1016. State to the Committee the scale in the case of the Leith Harbour?—The scale in the case of the Leith Harbour is at the rate of three per cent. interest, the principal being reduced annually by a payment of two per cent. as a sinking fund. I hold in my hand a calculation, showing the annual payments necessary to discharge 100*l.* upon that principle; and the Committee will find that the whole debt with the accruing interest will be redeemed in 50 years by progressively reducing payments. The highest being the first year of 5*l.*, and the lowest 2*l.* 1*s.* 2¼*d.* [*The witness handed in the Calculation marked* No. 1.] But supposing the annual payment was fixed, so as to be invariably five per cent., and the rate of interest to remain at three per cent., the whole debt would be discharged in 31 years; for the satisfaction of the Committee, I beg to put in this paper, which shows the operation of that scale. [*The witness handed in Scale marked* No. 2.] I hold in my hand other calculations, which I have prepared for the Committee. They exhibit what will be the payments at such various rates of interest and sinking funds, so far as I thought them likely to become practically useful.

1017. Have the goodness to state to the Committee the result of those calculations?—If I calculate on an annual payment of six per cent. by the borrower, three per cent. interest being charged, the debt will be paid in 24 years (see Table No. 3.) If upon an annual payment of seven per cent., four per cent. being the charge for interest, the debt would be discharged in 22 years (see No. 4.) At four per cent. interest, and an annual payment of six per cent. it will require 28 years (see No. 5.) At five per cent. interest, by an annual payment of nine per cent. the debt will be paid in 17 years (see No. 6.) At six per cent. interest, an annual payment of 10*l.* for 16 years will discharge the debt (see No. 7.) At three per cent. and three per cent. sinking fund, it will (as per No. 8.) require 34 years. At five per cent. interest, and nine per cent. sinking fund, it requires (as per No. 9.) 11 years. At six per cent. and ten per cent. sinking fund (as shown by No. 10.) 10 years will discharge the debt. At four per cent. interest, and six per cent. sinking fund (by No. 11.) you will find it requires 17 years. At four per cent. and seven per cent. sinking fund (by No. 12.) it will require 15 years. At five per cent. and four per cent. sinking fund (per No. 13.) 25 years. At six per cent. and four per cent. sinking fund (by No. 14.) 25 years. At four per cent. and two per cent. sinking fund (by No. 15.) it requires 50 years, the payments being annually reduced, as shown by the scale. At three per cent. interest, and five per cent. sinking fund (by No. 16.) it will require 20 years. At three per cent. interest, and six per cent. sinking fund (by No. 17.) it requires 17 years, and calculating four per cent. interest, and only three per cent. sinking fund (by No. 18.) the Committee will observe that it will require 34 years to pay the debt and interest; in the latter case, the first instalment will be seven per cent. and the last 1*l.* 0*s.* 9½*d.* per cent. Those calculations will exhibit to the Committee the annual payments to be made by borrowers, on the principle of the various rates of interest and sinking funds which I have enumerated. (*Vide* Appendix.)

1018. There is a distinction taken by the existing Irish Public Works Act, respecting the rate of interest to public bodies and to private individuals; in the one case it is four per cent. in the other five, would you make any distinction?—None; but if I made any distinction, it should be rather the reverse of that which has been adopted by that Act. In my opinion, the great object should be to diffuse employment generally throughout Ireland, to extend and improve agriculture, and to aid that class which stands most in need of pecuniary assistance. The commercial classes in Ireland, through her banking establishments, receive every possible facility, indeed I fear too much for the safety of their operations, and that at the lowest rate of interest. While the landed proprietors are not so fortunate, partly arising from the agitation in that country, but chiefly from the legal difficulty in dealing with landed securities, and this want of aid from capitalists necessarily checks the reclamation of bogs and mountains, as well as the general improvement of that country;

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country; and provided due caution be observed, so that in making Government loans to the landlords of Ireland, the money lent for a public object should be *bonâ fide* expended as intended by the loan commissioners, and not diverted to other purposes, I consider that such advances on the public credit would prove highly beneficial to all classes, and should be afforded at the same low rate of interest at which the Government can borrow upon Exchequer Bills.

1019. What rate of interest would you recommend to be asked in all loans?—Considering that equal advantages should be given to Ireland, I should recommend the rate at which loans are made in Scotland. If we refer to the history of that country, we shall find her first great advance as a manufacturing and agricultural nation was about the year 1770, and that in that year a most important Act, the 10th of George 3d, chapter 56, was passed: the Committee are aware that estates in Scotland are generally entailed, and this Act was framed to meet that impediment to her improvement. By the ninth section it recites, "And whereas it may be highly beneficial to the public if proprietors of entailed estates were encouraged to lay out money in inclosing, planting or draining, or in erecting farm-houses, and offices or outbuildings for the same, upon their entailed lands and heritages: And whereas such proprietors may be induced and encouraged so to do, if they, their executors and assigns were secured in recovering a reasonable satisfaction for the money expended in making such improvements from the succeeding heirs of entail." It was therefore enacted, "That every proprietor of an entailed estate who lays out money in inclosing, planting or draining, or in erecting farm-houses, and offices or outbuildings for the same, for the improvement of his lands and heritages, shall be a creditor to the succeeding heirs of entail for three-fourth parts of the money laid out in making the said improvements;" and it proceeds to provide remedies for recovering the debt so created. If this Act was passed by our Irish Parliament at the same period, it is my sincere belief that Ireland would have advanced as rapidly in wealth and civilization as her sister country (Scotland) has done, and at this hour no language could be framed more descriptive of her wants and the condition of her landowners than that contained in the preamble which I have read to this Committee.

1020. Is there any provision contained in that Act for proving the manner in which the money has been laid out?—The person intending to make improvements must first give notice to the next heir to the inheritance, stating in detail the nature of the improvements which are intended; and he must also deposit a specification of them with the sheriff of the county in which the lands are situate. He must annually deposit with such sheriff an account of the expenditure in the preceding year, together with the vouchers by which such account is to be supported when sued for or demanded; and one year after the death of the tenant for life, who has improved the estate, his executor, &c. may sue the next heir, and get possession of the estate for repayment of three-fourths of the expenditure with interest; but the expenditure is limited to four years' rental of the estate, and to that extent the executor of the last tenant to the entail will take in priority to the creditors of the then succeeding heir. By the 26th section, upon the improvements being made, the tenant in possession, who has so improved the entailed estate, may bring an action against the next heir, either in the court of session or before the sheriff, and on due proof being given of the sum expended, three-fourths of it must be decreed a charge upon the inheritance. The 27th section extends this principle to mansion-houses and out-offices. And by the 32d section, a most useful power to exchange lands was given to the tenant for life.

1021. Is not the benefit acquired by the estate the subject of valuation, rather than the sum expended?—The 10th section says, "Provided always, that the sum or sums of money laid out upon such improvements by any one heir of entail during his or her possession, shall not in any case whatever be effectual to constitute a claim against the succeeding heir of entail for more than four years' free-rent of the said entailed estates, after deduction of all public burdens." So that there is a limitation of the power given, as to the extent to which the tenant for life may charge the estate for improvements.

1022. Would you extend to Ireland the principle of the Scotch Act, to which you have now referred?—Certainly.

1023. But for these improvements of estates in Scotland the funds are private funds, and not public?—Most unquestionably; but the banking system, so long established in Scotland, has operated in aid of this Act of Parliament. The landed proprietors in that country, having under that Act a marketable security, are enabled to avail themselves of the facilities afforded by their banks for the improve-

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ment of their estates; tenants for life can create a transferable security, on which they can, as against the next tenant in the entail, raise money. But in Ireland this cannot be done; experience proves the advantageous result of such legislation in Scotland, and I desire to avail myself of that experience to benefit Ireland.

1024. Would you recommend the principle of this Scotch Act to be extended to Ireland?—Certainly; I consider that the extension of this Act to Ireland must prove highly beneficial to all classes, the tenants as well as the landlords. In principle, it is not even in that country new. It operates on glebe lands extensively; and by the Irish Act of the 9th of George the Second, the principle of the Scotch Act is established for the increase of plantations. That Act gives to the representatives of the tenant for life a moiety of the value of the timber within one year after his decease; and by the 5th of George the Third, chap. 17 (Ireland), more extensive encouragement was given to tenants to plant on the lands leased to them. This has been acted upon to a great extent; and by its provisions trees planted, and registered as such by the tenant, will, upon the termination of his estate, become his, and not the landlord's property. But the landlord, on payment of the full value to the tenant, may retain the timber so reared.

1025. If the principle of the Scotch Act was extended to Ireland, could the landed proprietors in Ireland obtain money without difficulty for the purpose?—I think it would afford them great facilities to obtain money. The chief part of the estates in Ireland are in large masses, strictly and almost continuously from generation to generation entailed. Upon the arrival at age of the eldest son, it almost invariably follows that the estates are opened, a new set of incumbrances let in upon them, and then a re-settlement takes place; and so on, until they are dispersed by sales under the Court of Chancery to discharge the incumbrances so created.

1026. Would you not place some control as to the laying out, and as to the amount to be laid out of the monies?—I should suggest that any Act of Parliament to be drawn up for giving effect to the principle I have suggested, should provide by the most cautious details against every kind of imprudence and fraud.

1027. What security can you suggest for the remainder-man?—If a scheme or improvement was prepared by the tenant for life, I should suggest that he should have the power to petition the Court of Chancery to have that scheme referred to a Master, who should be called upon to report whether or not the intended improvement was likely to benefit the inheritance to the extent of the proposed expenditure, if so, that it should be executed, and upon strict proof being subsequently given to the Master that the expenditure was in accordance with the original scheme previously approved of by him, I should then, but not until then, charge the estate in favour of the tenant for life with the sum so expended, or such proportion of it as may be deemed by Parliament equitable. In the case of a provident holder of an estate for life, the difficulties he encounters are almost equal to those of the person who is encumbered largely by previous debt. Such a person, under the usual terms of an Irish settlement, has power to charge but a small sum as a provision for his younger children; as a prudent father, having more than one child, he naturally seeks to accumulate property in aid of the provision to which he is restricted by his settlement—that, under the present system, he does through the public securities, &c. He cannot lay out his savings upon the improvement of his family estate, for the effect would be, to enrich the elder son and deprive himself of means to provide for his younger children; the consequence is generally, and in many cases even within my own professional experience, that estates which otherwise would be improved are neglected, and the savings accumulated by the tenants for life are laid out at interest upon loans secured on neighbouring estates or in the public funds. If a remedy, founded upon the principle I have suggested, was applied to such cases, the effect would be, that individuals so circumstanced and of a provident character would invest their savings, aided by their industry on their own estates, thus enriching alike the several branches of their families, and advancing a system of national improvement highly valuable to the community they belong to.

1028. Are the Committee to understand that you do not recommend loans from the Commissioners of Public Works to be made to individuals?—Quite the reverse.

1029. Would you extend the power of charging the inheritance for improvements to tenants holding under lease?—Under certain restrictions, I am prepared to do so. But if the tenant held under a lease of three lives renewable for ever, I should give him absolute power to charge his own interest. On a short lease I would

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I would give no such power to improve, unless under special contract, as against his landlord; and as my attention has been called to the leasing system in Ireland, I beg to state that there is a particular class of tenancies in Ireland to which I should like to call the peculiar attention of this Committee,—that class are College lessees; it so happens, that in the county of Kerry, with which I am particularly connected, I calculate the college of Dublin hold one-eighth. In the barony of Iraghtyconnor, their largest estate is situated; that barony is one-eighth of the county; and if we take the property which the college of Dublin hold in fee in other baronies, and add their area to that in Iraghtyconnor, I think we shall find the gross amount equal to the whole of that barony, which is one-eighth of the county. I refer to their estates especially, for, generally speaking there nas been no kind of improvement whatever made upon them. Though Mr. Nimmo, in his Report and Bog Survey, stated 23 years ago, that no estates were more improvable, he reports upon the face of the map I am now opening, that by an expenditure of 30,000*l.*, no less than 31,614 acres could be completely reclaimed, and of this estimate, 6,061*l.* is for roads, the remaining 24,352*l.* is for drains. Yet this report was made 23 years ago, and up to this hour it has remained a dead letter. I refer to this map in particular, because almost the entire district represented by it belongs in fee to the college of Dublin, and I attribute in a great degree its present state to the fact that the college only grant leases for 21 years, though by custom they are annually renewed as bishops' leases, but such a tenure is so unmarketable as property, money cannot be borrowed with facility upon it, and even the tenants who hold it do not consider it such as to justify them in laying out money on improvements to any extent. I regret that the provisions of the Church Temporalities Act, enabling the Commissioners to grant leases for 999 years in substitution for 21 years, were not extended to the college lands, and particularly so, as I have reason to know that three or four years ago the College Board (conscious of the necessity for a change in their tenures) caused a Bill to be prepared and submitted to the Government to enable them to remedy this evil; it might have been more than three or four years ago, but I recollect that Dr. Sadler (one of the senior fellows) came to London for the purpose. But after he had been here a few days the members of the College Board changed their minds, and the measure was abandoned. I understood last sessions the question was to be revived in the present year.

1030. Is the tenure exactly the same as formerly in the case of bishops' leases?—Yes.

1031. Besides college land in Ireland, are there not other lands generally called or known by the name of Sir Erasmus Smith's School Lands?—There are.

1032. Would you not also recommend the same power of leasing these lands to be given as you have suggested in respect of college lands?—I should recommend that all lands held in mortmain should be put upon the same footing as the church lands are now in the process of being placed, reserving to the present owners in fee a chief rent, but giving every possible encouragement to the tenants, by elongation of their tenures, to improve. We all know the immense extent of surface which belongs to the Ecclesiastical Commissioners, under the Temporalities Act of 1833; and if we add to it the college estates, the estates belonging to the trustees of Sir Erasmus Smith, of Sir Patrick Dunne's Hospital, and others, we shall find that a very great portion of the surface of Ireland is included in that class, and held in mortmain.

1033. Have you made a calculation showing the amount of the college land?—I have no calculation, but it can be easily procured. Mr. Griffith has made a report, valuation, and survey, for the college of their several estates some years since, and I conclude that the college would not object to afford the Committee the information they require of me.

1034. Would provisions, of the nature you have described, afford sufficient facility to tenants for life to raise money on loan for the improvement of private property?—Most certainly, to the extent they may be warranted to go, under any Act to be passed for that purpose.

1035. And would that dispense with the necessity of loans of public money?—To some extent, but not entirely. In the cases of loans from the Board of Public Works, I should propose to give a more extensive power, so as even to affect creditors. The chief impediment to borrowing from the Board of Public Works lies not merely in the settlements which would interpose between the Commissioners' security and the fee, but also in the various charges vested in creditors; and when the

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Public Works Act was originally brought into the House of Commons. I suggested that all loans made by the Commissioners of Public Works (they being an independent tribunal, with an appeal to the Treasury,) should have priority of every species of debt or settlement affecting the estate granted in mortgage to them. I did so, presuming that the Commissioners could not (under the terms of the Act) be induced to make loans for improvements which did not embrace public as well as private advantage. Unless such a priority be given, it will be found idle to expect that large sums of money will be ever employed by that Board in the improvement of land in Ireland, either by drainage or otherwise. The owner of an estate in a given district may be perfectly free and able to give them a security, but to make his projected improvement effectual, for public, as well as his own private, purposes, it most generally happens that it will be necessary to extend that improvement through some neighbouring estates, the owners of which may be under embarrassments or legal disability. In such cases, the efforts of the party willing to lay out capital are paralysed; but if the Board of Works had authority to give effect to the principle of general improvement by public aid, we could safely apply through them many remedies for the difficulties which the law now imposes; upon the same principle that by private Acts of Parliament for the establishment of public companies, we are enabled to take private property, even from incapacitated persons, for public purposes. But in order to protect creditors and remainder-men, I should propose that due notice be given to them of applications affecting their rights to the Board of Public Works, that the scheme for the improvement of each estate should be given in detail; and that the Board of Public Works should, before one penny is advanced, take ample security that the money they are about to advance should be duly expended upon the scheme they had approved of, and thus the creditors and remainder-man having had full notice, (should they have any valid objection to the grant, or to its mode of expenditure,) would have ample time for making their case out against the mode of expenditure and the loan. If, on the contrary, their objections were found unreasonable, it would be unjust to the tenant for life or owners of the estate, as well as injurious to the country, and a check to carrying into effect the object of the Legislature, if unreasonable objections on their parts were allowed to prevail. If I felt myself at liberty to detail the private circumstances of some gentlemen in Ireland, I could give abundant proofs of how much the want of such an authority to interpose between parties for their mutual advantage impedes the desired improvement, and keeps so large a portion of the country in so neglected a state.

1036. Then in all cases you would give a priority to the money advanced by the Board of Public Works?—Certainly, and upon the principles I have attempted to explain; because I consider that the Commissioners of Public Works and the Lords of the Treasury, they being responsible to Parliament and bound to report their proceedings annually to the public, are not likely to lend money except its expenditure will promote the public as well as private interest; much less could I apprehend that for the benefit of the applicant they could be induced to lend themselves to do any scheme by which the true and solid interests of the remainder-man or the creditors of the applicant could be compromised. In short, I expect that the loans on landed security which I refer to will be restricted to such indisputable and manifest improvements as will avoid all reasonable cavil on the part of remainder-men or creditors, and merely protect the applicants from expense and the embarrassments arising from a defective state of the law of property. I will call the attention of this Committee to one remarkable instance, that of the Dublin and Kingstown railway, to which the principle I advocate has been applied. Their Act passed on the 6th of September 1831. Under the 84th section of that Act, it was expressly declared, that the loan to that company should take priority of every other engagement of the company, and so also by the Ulster Canal Act. Thus the Committee will observe, that the principle which I recommend has already been adopted by the Legislature, and now affects large portions of capital belonging to private persons though vested in public companies, and therefore that to effectuate my object the principle only requires extension.

1037. Is it not rather to money invested in public works in contradistinction to the improvement of private property?—In the cases I refer to they are undoubtedly public works, but still they are works conducted by private individuals for private profit, and are according to every principle of law private property. If we look to the able reports on the improvement of Irish bogs, of 1812, and consider the great Parliamentary objects there set forth, while we find several millions of acres improvable

provable in the highest degree (the mere surveying of which by orders of Government must have cost a considerable sum of money), we must conclude that there is some radical defect in our present system, for as yet nothing of value (except to science) has resulted; no extensive reclamations have been as yet attempted; and that arises chiefly because of legal impediments; and while they remain it is hopeless to expect that those immense tracts of land will be effectually improved. This subject must be grappled with, or we of this generation will not have discharged the duties which we owe to our country and our posterity.

1038. Would not the object in a great degree be obtained by relaxing those impediments which affect it as far as regards its character as private property, without having recourse to public loan?—In time, for no doubt as Ireland improves her condition and advances in prosperity, a great deal will be accomplished by the application of private funds to such purposes; but if it be desirable to advance that country more rapidly, and as Scotland has been, partly by the liberal expenditure of public money on various improvements, such as the Highland roads and bridges, the Caledonian canal and other works, something like what I suggest must be done. Were liberal advances made for the improvement of agriculture in Ireland and the reclamation of her extensive bogs, I think the general resources of the Empire would be improved to an extent which I dare not attempt to limit by any speculation of mine.

1039. In your opinion would the country be more benefitted and advanced by money to be laid out in the improvement of land than in the prosecution of public works?—I know nothing that would improve the condition of Ireland so much or render her population more happy than the reclamation of her waste and bog lands; the immediate employment of her population, which would result from such an employment of capital, would necessarily diffuse throughout that country, first, an increase of comfort to the labouring classes, by producing continued employment at an advanced rate of wages, and next, such a feeling of gratitude and contentment as would produce internal peace and consequent prosperity among all ranks, creeds and classes. I have no doubt that, even in a financial point of view, England would within five years, by lending the assistance of her public credit for a few millions to Ireland, be the greatest gainer, even the saving by the reduction of her military and police establishments, now employed to keep a half-starving and unemployed population in submission, would be sufficient in a few years to pay off all the monies which would be required to effect the objects I contemplate.

1040. Accompanied with that declaration, would it not be necessary to have roads and bridges and lines of communication made in order to afford facilities for the transportation of agricultural produce?—I consider that facilities of communication are the necessary and indispensable foundations of all internal improvement. The roads called the Wellesley and Anglesey roads, which have been made of late years in Ireland, already produce singularly beneficial effects. It so happened that I had not seen the new Government roads in the neighbourhood of Abbeyfeale and Castle Island until last September, and having known that district perfectly before they were projected, I confess I felt astonished at the extent of the general improvement which the opening of these roads had produced.

1041. When you propose to give precedence to security to be possessed by the Board of Public Works, are you of opinion that the proposed works should be conducted and the money lent and expended by the Board for the protection of creditors and the remainder-man?—I should, as I before stated, place the expenditure under the strictest possible surveillance: I do not intend to suggest any improvements of a minor scale, and for mere individual interest, through the aid of public money. Such improvements on a minor scale, and not embraced as a part of a more extended system for a given district, may be accomplished through the alteration of the law which I have already suggested, and by private funds; but for such a district as that described by the map before me (the Cashen district, in the county of Kerry), where it is impossible to improve effectually except upon a large scale, I think that the entire work should be done under the superintendence of the Board of Public Works; that those persons who receive benefit, and who were unable or unwilling to contribute towards its execution, should be assessed, allowing the proprietors who paid the assessment voluntarily, or who may be forced to do so, to charge their estates in priority to creditors and others for the amount of the assessments made on their estates by the Board of Public Works, and in return the remainder-men and creditors would reap the extensive benefits which must flow to them from a general and substantial improvement, not only of

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the particular estate in which they were interested, but also of the district about it, thus securing the greatest of all benefits to a creditor or inheritor, the improvement and consequent pacification of the district in which his property lies, and this cannot (at least in my opinion) be attained by any other means within a period (if ever) on which we can calculate.

1042. Would you extend the mode of proceeding which you have suggested, in cases of reclamation of bog lands, to the embankment of lands, circumstanced as those lands are, with which you are acquainted upon the banks of the Fergus and the Shannon?—Certainly, throughout Ireland; my views are not confined to any particular district; I merely referred to the district of Listowell, because the map of it happened to lie open before me.

1043. This is not a new principle you have started; it has been acted upon in other cases, has it not?—I have started no new principle; I merely seek to extend that principle to Ireland, which has been found to work so beneficially in Scotland; and I will refer the Committee to the 43d of George the 3d, chapter 80. It was the first act for enabling his Majesty to grant money towards making roads and building bridges in the Highlands of Scotland, and for enabling the proprietors of land in Scotland to charge their estates with a proportion of the expense of making and keeping in repair roads and bridges in the Highlands of Scotland. That Act embraces the principle I seek to introduce, and though under it the Government were restricted to an issue of 20,000 *l.*, yet I find by the recitals of 59th Geo. 3d, chap. 85. (which passed in 1819, not more than 16 years after the first Act,) that no less than 240,000 *l.* had been contributed for the same purpose from time to time by Parliament. To this I conclude, that we have to add a similar expenditure of 240,000 *l.* by the landed proprietors of Scotland; and I confess that I view with alarm and regret the apathy of my countrymen, and particularly our representatives, who have not insisted on the trial of a similar experiment to improve the condition of Ireland. Surely the Irish are as well entitled to the aid of the larger and richer portion of the empire as Scotland, the West Indies, Canada, &c. May I hope that the system of inquiry about Ireland, and merely recording, reporting and debating, may be succeeded by the enforcement of practical results. All that we now urge for the benefit of Ireland has been done for Scotland, because her representatives insisted on the justice of her claims, and the measures which we now discuss for the amelioration of Ireland were recommended so long since as during the Duke of Ormond's government of that country in 1613; yet, as to Ireland, little more has since been done than to appoint committees, inquire, report, and debate.

1044. Does that provision apply to the improvement of private property, or to the formation of Public Works, in the nature of roads and so on?—I consider that the improvements I refer to in Scotland are of a two-fold character; they embrace a public object, (the making those great Highland roads which I find by the Act of Parliament before me, up to 1819, cost 240,000 *l.* of public money, and that was justification for the expenditure and free grant of the public money,) and by their effects a private advantage, for the value of the landed property through which they pass has been considerably enhanced; the latter effect was the justification of the Legislature for enabling the tenants for life to charge the next inheritor with a portion of the assessment on their lands for these improvements. I do not, therefore, call these roads purely a Public Work unconnected with private advantage.

1045. But that was the incidental advantage, not the direct improvement to the property?—It was incidental, but it combined the public interest with the emolument of private persons, owners of the estates intersected.

1046. It operated as an improvement, but it was not a direct improvement?—I consider it effected a direct and immediate improvement of private property.

1047. Was not that the effect of private improvement through the means of a Public Work?—Yes; but if the private individuals had capital enough of themselves to have made that road, they could not have proceeded to an improvement of their estates in a more effectual manner. In fact, they must have commenced with making roads to carry on the operations of agriculture, as well to procure a market for their produce as to bring home manufactures to supply their wants, and manure to cultivate their soils.

1048. But though that principle is the same as respects tenants for life and remainder-men, the principle surely is very different as respects landed proprietors and the public. The latter principle applies entirely to the formation of Public Works, and the other to the improvement of private property?—I consider the proposition I have made for reclaiming large districts in Ireland, partly by the aid

aid of loans from the Commissioners of Public Works, is in principle like to the public expenditure on the formation and repairs of the Highland roads. It is a combined purpose, partly public and partly private; such improvements will no doubt directly enhance the value of private property, but they will likewise advance the public interest, and that too, according to the experience we have of the effects produced by other works, in a much greater degree, though indirectly, through an increase of civilization and revenue; besides, taking up the subject with a view more to its imperial than to the provincial interests, the effect must be to bring many millions of Irish acres into profitable cultivation; affording employment to a numerous and half-starved population, who will then become, what they are not at present, consumers to a large amount of English manufactures.

1049. Would you, previous to the advance of money for improvement of private property complete such roads as formed the great lines of communication through the country?—If the system of improvement is to be established on a large scale, I should open the roads and drains at the same time, so that when both were finished the farmer may commence his operations; but if the public aid was so limited as not to permit of a combination of both objects, then I should commence with making roads; and allow me to call the attention of the Committee to Mr. Nimmo's estimate for the Cashen district, which shows the probable proportions of such expenditure. To reclaim over 30,000 acres will cost 30,000*l.* as I before stated; but of that sum, 6,061*l.* is required for roads, none of which (though planned and recommended 23 years ago) have as yet been attempted.

1050. Are you aware of any power for advancing public money for the improvement of private property in any part of Great Britain?—I am not sufficiently acquainted with the state of property in Great Britain to answer that question satisfactorily, but I should expect that many such loans have been made, either by commissioners appointed to aid Public Works, or to relieve the commercial and manufacturing classes. I hope the Committee will excuse my stating that I do not consider the cases of England and Ireland as similar. The industry and wealth of England have grown up together, and are the result of a wise system of government: Ireland has been governed during all that time by England, but upon such a system as to have effectually checked (except for late years) her industry and wealth. The present effect is that her wealth bears no just proportion (if we compare the condition of Ireland with that of England or Scotland) to her population, and in order to correct and remedy this evil, I only ask of English statesmen to give Ireland such aid as will diffuse general employment amongst her labouring classes, and thus lay the foundation for an increase of her wealth to the same standard in reference to population as that of England. The Irish peasants may well repine that they have not been able to excite the sympathies of England; they know that for their fellow subjects (who were until last year slaves in the West Indies) 20,000,000*l.* of money were freely paid by England, while a *loan* of one-fourth of that sum for the purposes I have suggested would totally change their condition.

1051. What security could be given that the money advanced for improvement of lands and made a first charge on the estate would be expended for the precise objects detailed in the application, and not applied to personal advantage?—The question involves no difficulty whatever; we may take as a model the provisions of the 10th of George the 4th, chapter 109, for the Ulster Canal Loan. By section 3, it is necessary for the company first to expend a given sum of money, say 5,000*l.*, and having done so, the commissioners lend the company 20,000*l.*, taking security for its due expenditure, and when the company ask for more money, they must prove to the satisfaction of the commissioners that they have expended not merely 5,000*l.* additional of their own monies, but that the 20,000*l.* first lent has been also duly expended, and so on to the end. I should also observe that the English Loan Commissioners have appointed an engineer to inspect the progress of these canal works, and that he is called upon from time to time to report to them, so that, in point of fact, no advance is made until the most satisfactory evidence has been given as to the previous expenditure. If such principle was established for the improvement of lands, an effectual check would be provided. Let the Commissioners require that the borrower should commence the expenditure, and so proceed as the Ulster Canal Company do at present with the English Commissioners. I should endeavour by every possible means to guard the country and the exchequer from frauds in the use of monies to be advanced in Ireland, either in aid of Public Works or for the improvement of waste lands; no system could be too strict in its details to meet my views on this point.

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1052. Does it occur to you much easier to measure a canal, by observing the work done upon the canal, than to ascertain the improvement by means of reclamation and drainage?—I do not anticipate any increased difficulty with respect to drainage, as the works are easily measured, as a canal embankment, and the price to be paid for one, is as readily ascertained as for the other.

1053. Do you contemplate the improvement of agriculture, or do you merely now mean to state to the Committee a recommendation respecting the drainage of lands?—As to the drainage and improvements recommended by Mr. Nimmo, Mr. Griffith, and other able reporters on the Irish Bogs, my view is this, that the public aid should be confined to the preparing of these lands for agriculture, that is, putting them into a state fit for the husbandman to commence his work. I do not propose that public aid should be given beyond that point. The introduction of the Scotch law which I have suggested would aid in completion of these improvements; and I find that the principle of the Scotch law has been so much approved, that there is now pending in the House of Commons a Bill, brought in by Mr. George Fergusson and Mr. Cumming Bruce, extending the encouragement to make improvements to tenants for terms not exceeding 21 years. To that Bill I beg to direct the attention of this Committee, for a similar provision by law in Ireland would tend greatly to advance the cultivation of the college and other corporate estates which I have mentioned. Its recital fully establishes that the principle I contend for has been beneficially carried into effect in Scotland. It runs thus:—"Whereas several Acts have passed in the reign of his Majesty King George the Third, and in the reigns subsequent thereto, to encourage the improvement of waste and uncultivated Lands upon Entailed Estates in that part of the United Kingdom called Scotland: *And whereas under such encouragement much capital has been laid out, and millions of acres thereby redeemed from waste:* And whereas in administering the law applying to such improvements it has been held, that meliorations to tenants holding improving leases should be a charge upon the personal property of the grantor of such leases, instead of constituting a charge upon the rental of lands so improved: And whereas the spirit of all laws and all leases now existing contemplate and imply such charges becoming a legal burthen upon such rental;" and provides, "that where tenants bind themselves to erect buildings, &c. the meliorations therein covenanted for shall constitute a preferable claim against the rents, not exceeding two years of the free rental; and that the sheriff may appoint a person to report to what extent yearly value has been created: and that where mills or other machinery have been erected under the sanction and guarantee of a lease, then it shall be competent to the proprietor of the estate to fulfil the conditions of the same out of the rental of the estate, or failing to do so, it shall be competent to the tenant to sell or remove the said mills or machinery, as to him, her or them shall appear most desirable."

1054. Is not laying down gravel a very large part of the expense attendant upon reclaiming land?—Yes, and that comes quite within my view; namely, preparing the land for the husbandman.

1055. Is it not difficult to ascertain the quantity laid out upon land?—It is not by any means difficult, if a proper system be adopted.

1056. You have suggested, that in case of these great improvements the works should be wholly under the superintendence of the Board of Public Works?—With the assistance of persons appointed by them, as in the case of public works through contractors.

1057. Then such proof on the part of proprietors of land would not be necessary?—No. I visited last September the Crown estate in the county of Cork, where improvements are making upon a great scale at the public expense, and under the management of Mr. Griffith, controlled by the Commissioners of Woods and Forests. That estate contains 5,000 acres of mountain and bog. The first operation has been to open roads through and from it to the different market towns; and now the buildings and other improvements on the estate *per se* are in progress, but, as I understood from the overseer, they are not, with the exception of a model-farm, to go beyond the point I suggest, namely, draining, fencing, planting and buildings. This done, the Government officers propose to let the entire lands to farmers at moderate rents.

1058. Would the direct and immediate profits repay the expense of such reclamation of waste land on a large scale, or do you think the indirect advantages to the country is to be considered adequate remuneration for the advance?—I do not entertain the slightest doubt that such a system of improvement would increase the national

national wealth and power to such a degree, as not merely to justify the expenditure I contemplate, but ten times as much more. And I beg to refer the Committee to Mr. Nimmo's own concluding words upon that subject; they will find them in page 102 of his Report to the Commissioners for Bogs, &c.:—"Upon the whole, I am perfectly convinced of the practicability of converting the whole of the bogs that I have surveyed into arable land, and that at an expense which need hardly ever exceed the gross value of *one year's crop* produced from them, that I declare myself willing, for a reasonable consideration, to undertake the drainage of any given piece of considerable extent, and the formation of its roads for the sum of 1 *l.* 1 *s.* per acre; and to prepare the same for the reception of any crop for 10 *l.* per acre, which is little more than seven years' purchase of the rent it would then afford. At this rate, the whole bogs I have surveyed in this district, about 150,000 English acres, might be converted into arable land for about 1,000,000 *l.* sterling."

1059. If the improvement is so immediately direct, where is the hardship of demanding a large rate of interest?—The rate of interest in Ireland during the last 20 years has been gradually declining; at first it was 6 per cent. generally throughout Ireland; since the formation of the provincial bank of Ireland (by which establishment the rate of discount on commercial paper was reduced to 4 per cent.) the tendency has been to reduce the interest on landed securities to 5 per cent., and that is pretty generally the rate in Ireland; but we now look to reduce it to 4½ and to 4 per cent.; already in the north of Ireland many securities are held at 4 per cent., but in the south and west we find we have not reduced it below 5 per cent., and my opinion is that the Government aid should (when afforded at all) be given upon the most liberal terms; it should be for *aid* and not for *profit*, as mere money-lenders; the Treasury should be content to receive the same rate as that which they pay, accompanied, as experience proves it would be, by increase of revenue and the numerous other great advantages which would flow from an improved state of agriculture and society in Ireland. Evidence has been given before several Committees of this House, that since the new roads have been made, during Lord Wellesley's and Lord Anglesey's governments, the excise revenues of the several districts through which they were carried have so increased as to amount in one year to a sum equal to the gross expenditure on them by the public. Besides this improvement of the revenue, I am entitled to calculate on the saving of public money through a reduction of the police and military force kept up in Ireland, and which would necessarily follow an improvement in the condition of her people; and in reference to this subject I beg to hand in a letter which I received from Mr. William Shea, accompanied by the calculations he enclosed in it—[*Witness handed in the Letter and Calculations; vide Appendix.*]

1060. But if the rate of interest is low, should not the per centage payment to the sinking fund upon these works, which produce an immediate and profitable investment of money, be much larger?—It would be a very proper arrangement to regulate the amount of the sinking fund according to the individual circumstances of each loan; and I should propose to give the Board of Public Works full power to decide what should be the amount of the sinking fund in each case.

1061. You are aware under the present Act that the Commissioners are confined with respect to public bodies to 4 per cent., and 4 per cent. sinking fund?—That is the condition imposed by their Act, but after the loan has been advanced they are empowered by another clause in the Act (subject to the control of the Treasury) to prolong the periods for repayment of the principal money advanced, though they cannot reduce the rate of interest below 4 per cent.

1062. You are aware, in case of private individuals, money advanced by the Board for the purpose of improving estates must be repaid within three years after the work is completed, providing that completion is not effected within seven years?—Yes.

1063. Would not the scale you have proposed of 3 per cent. interest and 2 per cent. sinking fund be very injurious, as making the money advanced by Government go much less way than if the sinking fund was considerably heavier in this case?—I should prefer the second scale given in by me to the first; under it the payment would be uniformly 5 per cent. on the amount originally borrowed, of which 3 per cent. is to be deducted for interest, and that would discharge the entire debt in 31 years, and in some cases I should require a larger rate of redemption. Whatever sum the borrowers could (by the profit on their works) afford to pay in the shape of redemption I should enforce; but from the principle and system on

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which loans are now made by the Board of Works I respectfully dissent. I hold in my hand the first mortgage granted to the London Loan Commissioners by the Ulster Canal Company; the conditions are to repay the whole sum lent with interest within 20 years, as follows: on the fifth year one-fifth of the advance, together with interest on the whole sum for that period at 3½ per cent., and for the succeeding 15 years a twentieth part of the loan, with interest on the balances at the same rate, 3½ per cent. Even to this system many strong objections arise, for upon the opening of the canal, and before its trade is advanced and scarcely existing, the company have to make the largest payments; I should rather reverse the order, or at all events divide the instalments so as to operate equally on the last 15 years.

1064. In your opinion do you think that these reclamations would take place in Ireland, without the aid of money advanced by the public?—It is a mere question of time; if we desire to improve Ireland to any great extent, within 20 or even 50 years, I should not hesitate to say that we must get the aid I suggest, not money as a grant, but the assistance which England can give us in borrowing money by joining us in the bonds required by the lenders. We find by the Reports on Bogs now before us, that during the 23 years since their publication none of their recommendations have been acted upon; I only know of two instances, that of Mr. Featherstone in the county of Westmeath, and the other is by the Government in the county of Cork. Mr. Featherstone's experiment has been most singularly successful, it so happened that he had the power of acquiring a large quantity of bog, and he having capital enough to improve it, he is now enabled to grow the best wheat on land which could scarcely have been trodden by snipes a few years ago; but in those districts on which Mr. Nimmo has reported, and with which I am well acquainted, I do not hesitate to say that I have no hope of seeing any thing effectually done, at least upon what I should call a national scale, unless the law as to tenants for life and lessees under corporations is altered, and that they and the other classes of landowners are judiciously aided by the Government.

1065. Can you state to the Committee any particular instances of large estates, capable of improvement, that now remain in a state of waste for want of those improvements?—There is one estate belonging to Mr. Martin, of Connamara, I understand it is 200,000 acres. I have not seen it, but from all the reports of its condition which I have read, the expenditure of capital upon it would realize most extravagant profits. Mr. D'Arcy's estate, at Clifton, is in the same condition. Besides these, I could name many other estates of very large extent, which afford equal temptations for the expenditure of capital, most beneficially to individuals, and still more so, though indirectly, to the empire.

1066. Is the Committee to understand, that, in your opinion, money would be most usefully lent by Government to individuals and public bodies at a rate of three per cent. interest, and a sinking fund of two per cent.?—Yes.

1067. That is your opinion?—Certainly; but I think that a discretionary power should be vested in the Treasury and the Board of Public Works to increase the amount of the sinking fund, according to circumstances; and where the improvements about to be aided were of such a character as to enable the borrower to repay the loan more rapidly than at the rate I suggest, it is my desire to make such borrowers do so, in order to keep up the available fund at the annual disposal of the Commissioners as high as possible.

1068. How would you provide for any loss arising to the public, in case of any deficiency of security?—Loss to the public is almost out of the question. The provisions of the present Public Works Act are very strict, every possible precaution has been taken; the loans under it can only be made upon unquestionable security; and while on this point I beg to say, that while I do not complain of the cautious system adopted by the professional persons connected with that Board, yet I feel that in order to give effect to the intentions of the Legislature, it is necessary to remove many difficulties of a mere technical nature which now deter persons from dealing with the Commissioners.

1069. Why lose the reasonable precautions Government has provided, to give effect to the provisions of the deed and to prevent any loss?—I do not wish to abolish any useful precaution by the Commissioners, I only desire to reduce the legal expenses, the rate of interest charged by them, and to (above all things) remove the legal impediments which act as barriers against the objects of the Government and the Parliament. I should look upon it as a mischief to the country if the Board of Public Works had authority to lend money upon any but the

the best security, because, if they were so to lend money, their operations would tend to encourage unproductive and speculative improvements, which would lead to loss of private as well as public capital, and end in ruin instead of steady prosperity.

1070. Suppose they are mistaken and the thing should turn out ill?—I cannot suggest any remedy in such cases; they result from the defective power of foresight in human agents, and to the consequences of which human institutions must remain liable.

1071. Do you not say in that case the public are losers?—In extreme and isolated cases they may be losers, but upon the whole result of the experiment the public must be greatly the gainers.

1072. Are they repaid in any way or not?—The general effect of such a system of encouragement as I have described, must be to ensure ample repayment for occasional losses.

1073. Suppose a war to arise, and the rate of interest upon public funds instead of three per cent. on Exchequer Bills was to become five, how would you indemnify the public in that case?—Very easily; I should adopt the principle which is acted upon by Insurance Companies at present, they advance monies at a variable rate of interest, regulated by the price of the funds; if the funds are at 80, the rate of interest is regulated accordingly; if at 90, the rate of interest is reduced; if it goes back to 70, it is increased. The Government may adopt a similar plan, and thus the changes from peace to war would be effectually provided against. No difficulty whatever can arise in applying this principle to Government loans; it is well known and extensively adopted by Insurance Companies.

1074. In reference to the reclamation of waste lands, would you think it objectionable that a power should be given to grand juries to take tracts of bog or mountain land, under particular circumstances, for the purpose of establishing institutions, similar to the Home Colonies in Holland, with a view of employing the able-bodied poor, and at the same time improving the country?—My opinion upon that subject would be governed by the details of the plan. In grand juries, I have little, if any, confidence; none in their administrative powers. I might, under circumstances, be disposed to give them power to present money to purchase lands for public purposes, but I never would give them the power of administering all the details of an establishment for the poor. We are not far off from a system of poor law of one kind or other, and, when the machinery for it be established, to the body so erected I should commit the management of such establishments as now suggested to me.

1075. Supposing you were to confer the appointment by grand juries of a permanent committee of superintendence to manage and regulate such poor colonies, would you, under those circumstances, consider it objectionable that the power of taking such land should be given to grand juries?—I should very much doubt the prudence of giving such powers to grand juries, for my experience leads me to think that there exists too great a spirit of jobbing in those bodies. When a poor law is established in Ireland, I hope to see it guarded by every possible means from abuse, and placed under the management of Commissioners appointed by the executive authorities, and responsible to Parliament.

1076. Would not such institutions act as excellent agricultural model schools?—Undoubtedly; and their being so would induce me to think favourably of them. I am a great advocate for the establishment of agricultural schools, and I am now engaged in an endeavour to establish one upon the principle of the Wexford school in Kerry, and another at Limerick.

1077. To what circumstance do you attribute the failure of Mr. O'Ferrall's Act?—The Act to which the question refers is the 1st & 2d of Will. IV. c. 57, and the opinion I now entertain of that Act is the same as that which I expressed when it was introduced into Parliament, namely, that its machinery would be found so cumbrous as to destroy its efficiency, as no body of men could give it existence without the constant attendance of professional persons. The power to erect companies, which this Act gives to the Lord Lieutenant, should have been given to the Board of Public Works, and in as general terms as possible, so as to enable them to meet each particular case in framing the charters which they may be called upon to grant. Under this Act of Parliament, a strict and technical attention must be paid to each and all of its provisions, and this creates legal impediments, which can scarcely be conquered except by the vesting of such general authority as I suggest in some public board. At present we have the principle which I suggest acted

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upon by the Board of Trade. As my attention has been called to this Act of Parliament, I beg to state that the principle of charging the inheritance with the outlay made by the tenant for life in its improvement, has been strictly laid down by the 76th section, not merely as applicable to tenants for life, but to bodies politic and corporate, vicars, rectors and others; they are entitled to mortgage their lands for any sums which may be assessed upon them. Under this Act they are only bound, as life tenants, to pay the interest on the charges thus created.

1078. You mention some corporation under the Board of Trade in England; to what corporation do you allude?—Trading corporations; and the only remaining impediment is the very considerable expense attending on the grant of a charter; it is seldom less than 800*l.* That sum is paid in fees to the public offices, and as I propose the creation of a similar power and in a new tribunal, I do not consider that I shall affect any vested interest, either of the Attorney General or any other person, if I establish a new scale of fees upon a moderate basis.

1079. Is not the direct profit of reclamation of bog and waste lands on a great scale still a problem; the operations on the Crown lands at Pobble O'Keefe are only called experimental, and will after a few years throw a great deal of light upon the subject?—They will; but I do not think it all experimental; when they are improved, they must be highly profitable; there is no person acquainted with the surface of Ireland who must not give evidence to this effect.

1080. Is it not strange, with the very profitable returns promised by Mr. Nimmo, only two attempts have been made at reclamation on a large scale, those quite recent, and one of them by Goverment?—Considering the state of the country, the districts in which the bog lands are chiefly situate, and that they are held in large masses by proprietors (encumbered by very large debts) or tied up by settlements, it is not to me a matter of surprise; I may add, for the information of the Committee, that a very large mass of property in the county of Kerry alone, and which was the principal object of his survey, labours under a great disadvantage, on account of the defective state of its tenure—I refer to the college estates, which are held for a term of 21 years, and though they are by custom renewed annually, the nature of the tenure has checked and will continue to impede improvements on an extensive scale upon them. We also find that some of the roads recommended by Mr. Nimmo as introductory to his system have only been made within the last five years.

1081. Would not a great part of the difficulty be removed by empowering tenants for life and public bodies to charge the land in remainder?—Certainly, but to a limited extent; we must superadd even to loans, many additions to the existing law. The map I refer to shows that though 23 years ago Mr. Nimmo recommended (in order to make the river Feale navigable from the sea to very near the town of Listowell, a distance of ten miles) an expenditure of 1,000*l.* upon the Cashen Bar, yet it has not been executed, and that arises solely from want of power in the grand jury of the county to make such a presentment. I am only pointing out one of a thousand instances which these reports suggest to my mind.

1082. Is not cutting through the bar a very questionable experiment?—Mr. Nimmo speaks of it as quite practicable; not being an engineer, I do not wish to venture an opinion, but after having visited that place in last September, I do not doubt of the easy execution of the work.

1083. In reference to the question whether any improvements at Pobble O'Keeffe, had not been problematical, are you not acquainted with many districts in which the difficulty you have described with respect to the proprietorship does not exist, in which the most striking and almost inconceivable improvements have taken place, particularly in the west part of the county of Clare?—I am not acquainted with that part of the county of Clare; I have not visited it for some years; but in the district in the county of Kerry which I visited last summer, the improvements on Lord Headley's estates present a striking illustration in aid of the principle which I have suggested.

1084. You have stated the payments to be required by the Board of Works to be five per cent., that, I believe, is the species of loan for the improvement of private property; but the case referred to of loans at a lower interest, such as the Ulster Canal Company, were for public works?—Yes; I propose the payment by the borrowers annually to be five per cent. on the gross amount borrowed, but that the rate of interest should be only three per cent. The loan to the Ulster Canal was made at $3\frac{1}{2}$ per cent. interest, and by the English Commissioners and not the Irish Board.

1085. But

1085. But still the money that has been advanced at a lower rate of interest is for a public work, and not for the improvement of private property?—Certainly.

1086. But is it not unfair that parties who borrow for the improvement of their private property and the increase of their revenue, should have the power of borrowing at the same rate of interest as individuals who are borrowing for the sake of completing a great public work or object?—A distinction may be often drawn between such cases, and my wish is that the Board of Public Works should not show themselves over-anxious to make loans to private individuals; I should leave a discretionary power with them, trusting that they would be governed solely by a desire to advance a great public object.

1087. Is it not rather important that there should be a high rate of interest to check constant application from private individuals for private advantages to obtain loans?—It does not appear to me advisable to check applications to the Commissioners. Let every possible case come before the Board of Public Works; they will by that means have increased information and a larger field to make selections from; and upon them and the Treasury will rest the responsibility of the advance.

1088. Do not you consider the improvement of waste land is a public work?—Decidedly, and as one of the highest degree of utility.

1089. You made a distinction between public work and waste lands; it may be in the hands of a private individual and may still be a public work, because for a public purpose it is done?—It must tend to increase the public wealth.

1090. Have you turned your attention to the expenses arising out of the present system of advancing loans by the Board of Public Works?—Yes, to that part which may be called the legal expenses; I consider they may be most advantageously curtailed and reduced to a mere nominal charge. The Public Works Act should be amended, and a formula of mortgage in a few lines (as by the 74th section of the 1st & 2d Will. IV. c. 69) adopted, and priority should be given by the Act to every such mortgage. The Act I refer to was for the establishment of the Kingstown Railway, and when we agreed for a loan with the Board of Public Works, and that we came to prepare the security, I argued that the Commissioners ought to accept it in the form given by the 74th section, which contains just fifteen lines, aided as it would be by the 84th section of the same Act, which declared that any advance by the Public Board of Works was to have priority of every other claim on the Company. In my opinion no security could have been more perfect; however, the legal adviser of the Board thought differently, and the consequence was, that they prepared one of the most voluminous instruments as a mortgage which I ever saw, and even that they called but a preliminary mortgage. I then urged the adoption of the form of mortgage used in England, as in the case of the Ulster Canal, which contained but three sheets of paper; but there again I was foiled, and the result was, that the Company submitted to the expense of the mortgage deed as prepared by the legal advisers of the Commissioners, and the advances were made to within 1,000 *l.*, according to agreement; but I am now called upon for a second mortgage, much more voluminous than the first, and when it was sent to me I was called upon to make out title to every inch of land through which the railway passed, though I had bought under the authority of inquisitions. To this I most decidedly objected, as the making out of title in the manner proposed would have involved the Company in an expense which I could not have estimated, even as low as 10,000 *l.* We bought from about 450 persons, and if I submitted I should have been obliged to make out 450 titles, one for each particular estate, and upon bringing my objection before the Board of Commissioners, they waived the inquiry as to title, but chiefly on showing them that the Loan Commissioners in England never made such a requisition. Therefore, in order to protect the public and the Board of Works against the recurrence of such a demand, I beg to suggest (at all events in reference to canals, railways, and works of that description) that a formula of mortgage should be introduced into an amendment of the Public Works Act, which may be executed by the borrowing parties, and declared to take priority of every other engagement of the borrowers. If my suggestion is adopted, the expense which will attach to these transactions will not exceed a few pounds, say 10 *l.* in any one case.

1091. What was the total expense in this case?—I never saw the bill of costs, or even heard of the amount.

1092. What do you conceive the costs ought to be?—Under the Act of Parliament, and according to my views, the Commissioners of Public Works should have been content to have taken a mortgage in the form given by the Company's Act, which also declared that loans made by them to the Company should have a priority

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over all other engagements, and such an instrument could not possibly have cost so much as 10*l.*

1093. Have you had any reason to complain of the expense incurred upon application for the Report of the Board's engineers?—No.

1094. Nor of the payment to the engineers sanctioned by the Board?—No; I never had any.

1095. Are you not aware that since that case occurred, the shorter form of mortgage has been adopted by the Board?—No, I am not—though my brother and partner might know the fact.

1096. In the case which you have alluded to, what do you conceive would have been a reasonable charge for the legal business actually done, I mean including the long mortgage; you have stated the actual expense ought to be under 10*l.*, what do you conceive would be the fair legal charge for the business done?—I have no reason to believe that any thing more than a fair and reasonable charge has been made.

1097. What do you conceive to be the approximation between the expenses?—It would entirely depend upon the length of the instrument; and I do not think that, under the system upon which the security in question was given, the expense of 100*l.* was more than it ought to have been. It is to the principle of the old system I objected.

1098. In the case of the Kingstown Railway, I believe the Board made no charge for the Report of their engineers, they being on the spot?—I do not know.

1099. Are you acquainted with the sea-coast of Ireland?—A good part of it; the south coast principally.

1100. Do you consider that the expenditure of money in building of safety harbours for vessels not exceeding 50 tons burthen would be beneficial to the community at large?—Most certainly; and wherever they have been established, fishery piers have been found very useful. In truth, the extension and success of our fisheries must depend upon the execution of similar works, for unless places for asylum are established along our coast, we cannot protect or harbour the craft necessary to fish in the deep sea.

1101. Do you consider for that description of work it would be prudent to make grants?—Certainly; the experience we have of the effect of such works proves their usefulness; and in a financial point of view, I beg to suggest to this Committee, that power should be given to the grand juries to borrow money on debentures, which should circulate in the nature of Exchequer Bills locally in each county. Such securities would be sought after most greedily, and they would operate with the middle classes in aid of the savings bank. In my opinion, several hundred thousand pounds, if not two or three millions, may be raised at a low rate of interest on such county bonds, and thus the number of applications to the Board of Works would be reduced. Such debentures, payable with a small rate of interest, and for sums not less than 50*l.*, would act as a safe and advantageous currency throughout Ireland; they would pass from hand to hand, and teach the middle classes how to make their capital fructify for the smallest space of time. It is not worth while to buy Government stock for a few days; and as depositors for more than 50*l.* in any one year are shut out from the savings bank, the local securities I describe will be found most beneficial. But if this system was established, the issue of debentures by each separate grand jury should be guarded by every possible means, so as to prevent an abuse of the system by over issue. The issue should be controlled by the Treasury, and annual returns should be made to Parliament.

1102. Do you not consider the making a pier upon the south-western shore of Ireland would be beneficial to the United Kingdom?—Most certainly; it would, in the first place, tend to protect property to the value of several hundred thousand pounds annually, which is now lost upon that coast, and paid for in England by the insurers at Lloyd's and elsewhere. One of the principal insurance houses at Lloyd's told me within the last week that it was estimated that no less in value than 2,700,000*l.* of British manufacture was lost annually, and paid for by the underwriters of England; and that a large proportion of their losses arose from wrecks on the Irish coast. He has promised me a detailed statement of the facts upon which this calculation has been made, and if I receive it before this Committee report, I will hand it in.

1103. With reference to the debentures to which you have last alluded, would it not be an improvement upon your plan, if savings banks now established in Ireland were allowed to lend their funds to the grand jury for these public works?—I think it would; but the savings bank being limited to deposits of 50*l.*, my

object

object is to extend the principle by the issue of debentures for 50*l.* and upwards, which will be held by shop-keepers and the principal farmers of each district.

1104. But you would call the aids of loans from the savings banks in this respect?—Yes, by allowing the trustees to invest their funds in the county debentures, if they preferred them to the Government stocks.

1105. The Committee understand that you would invest grand juries with the power, which they do not at present possess, of raising money by presentment for the erection of piers, the improvement of harbours, the deepening of rivers, the embankment of lands, and for various other purposes of a useful public character?—Yes, but always subject to the control of the Treasury, and of the Commissioners for promotion of Public Works.

1106. Would you not limit the sums they had to borrow with reference to the annual income of the county?—Undoubtedly; and I again repeat that unless an efficient check shall be established to prevent an over issue of such debentures, I should be the first to oppose such a system. It is on that account that I propose that no debentures should be issued unless upon a warrant from the Lords of the Treasury; and I should also require that each county should, annually, submit their accounts to Parliament.

1107. Is your preference of the Board of Works as a means of executing extensive lines of road founded upon an observation of their having maintained such roads in a better state of repair than roads which are under the care of the respective counties in Ireland?—The roads under the charge of the Board of Public Works, which I travelled last summer, were in a much better state of repair than those kept up by the presentment system, or even by the Turnpike Commissioners; and so far as my opinion is of value, I do not hesitate to state that I should wish to see all the roads now managed by turnpike trusts, as well as the other main roads throughout Ireland, placed entirely under the control of the Board of Public Works; and I should give to that Board power to lay out new or improved lines according to their discretion, without being controlled by grand juries.

1108. In short, the effect of placing these roads under the Board of Public Works would be to secure unity of purpose and good execution throughout the whole?—Undoubtedly, the selection of the line should be left as much as possible with the Board of Works, independent of every species of local influence, and when they selected and surveyed any particular line of road, they should have authority to send in a presentment to the next Judge of assize; and if no traverse was taken, or that a verdict was found in favour of the presentment, I should then require that the Judge should fiat the presentment without the intervention of the grand jury.

1109. Your preference of the Board of Works to grand juries has reference to the present constitution of grand juries; would your objection to grand juries be equally strong if measures were taken to improve their constitution for establishing a better administrative system under their control?—I think it scarcely possible to improve the grand jury system so as to prevent local influence bearing too much upon all local improvement. It may be desired by a class of gentlemen who would serve upon a grand jury in one county to have a great road taken in a particular direction, while their neighbours of the next county desire it to be taken in an opposite course; the result usually has been a compromise, through which individuals are benefitted at the expense of the public interest. If the power of laying out the great lines of road is vested in the Board of Public Works, they being a Public Board and subject to the control of Parliament, and placed above the reach of local influence, I should confidently anticipate a great improvement of our present system.

1110. Are not the parties locally interested those to whom the making and keeping up of the road on the best footing is an object of the greatest moment?—I admit that they are the persons more immediately interested in the management and repairs of their county roads and other works, but my experience justifies me in stating that Public Works are too often made the instruments of individual objects through the influence of leading individuals serving as grand jurors.

1111. Is the system which you recommend adopted in France?—Yes.

1112. Is it found there that a central administration has been productive of as much benefit as you suppose would arise from it?—I am not sufficiently acquainted with the condition of Public Works in France to be able to answer that question.

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1113. You would submit the accounts of the expenditure to the review of the grand jury, in order to enable them, in case any thing appeared to them exorbitant or to bear the character of jobbing, to interpose a check?—Undoubtedly, the proceedings of the Board of Public Works should be as much as possible open to public investigation and control.

1114. Are you not aware that at present considerable dissatisfaction has been found to prevail in cases of several of the grand juries when they have been called upon to present upon the fiat of the Judge large sums of money in repayment of the expenditure by the Board of Works for the maintenance of the roads within the county, they having no power of inspecting or in any way controlling the accounts or that expenditure?—I am not aware of any.

1115. Have you had occasion to observe that complaints are more frequent now than they were formerly about the expense of the roads?—Since the appointment of the county surveyors a new system of road making has been established, of which I entirely approve. They must be made (in order to receive the approval of the county surveyor) in the best, instead of as formerly the worst, manner; the consequence is that the present expense is considerably increased; I consider it but a temporary charge consequent on the change of system, which requires a larger outlay in making the roads permanent, and which will ultimately tend to economy. But even the last Grand Jury Bill in many respects requires amendment. The time necessarily occupied in carrying a new road, though ever so useful, is too long, and is practically an impediment to their construction; it takes nearly 18 months to get through all the necessary forms to open a new road, and six months more to gravel and complete it.

1116. Then it is your opinion, that the Grand Jury Act of the year before last requires a considerable alteration in its reference to Public Works?—Yes; it requires an extension of powers, so as to embrace many useful objects, and that the works should be more promptly executed. I should also desire to call the attention of the Committee to the manner in which the financial affairs of the counties are conducted. In my judgment we should put an end to the expensive system of collection and county treasurers. The treasurers have large balances of the public money at all times in their hands, the interest of which forms the chief source of their emolument; hence the public money is used for private profit. I proposed, while the last Act was under consideration, that through the aid of the banks now established in almost every county, that public money should be made productive, and drawn out from time to time for public use by two members of the County Finance Committee, countersigned by the secretary of the grand jury; from such a system I should expect that, instead of allowing the treasurers to make a profit from the public money, that the public would make a profit by getting interest on their balances from the banks; but it would be unjust towards the present treasurers of counties (as they were only lately called upon to give security to a large amount, and in many instances at great expense) to deprive them of their present advantages; but as they drop off, no new treasurer should be appointed.

1117. The finance committee of which you speak, you would recommend should sit from assize to assize, and be a permanent body; would you intrust such permanent committee with the superintendence of the Public Works of the county?—I would suggest, that at each assize there should be a selection of a finance committee, such as now appointed, to manage the gaol; they should be re-appointed at each ensuing assizes; they should not be a continuous body.

1118. Would you consider it desirable that smaller executive committees should be appointed for baronies or districts within the county?—I should recommend sub-committees to be formed from the magistracy at petty sessions to act for each barony; and by every possible means I should endeavour to provide for cash payments for all public works, so as to pay the labourers every Friday, to meet their Saturday's market.

Veneris, 15° die Maii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

James Loch, Esq., a Member of the Committee, further Examined.

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1119. IT has been suggested to the Committee, that it might be desirable that a power should be given to tenants for life in Ireland to charge the estates with a portion of the expenditure required for making permanent improvements, upon the same principle as is now done in Scotland under certain Acts which were stated to the Committee; have you any acquaintance with cases in which such improvements have been beneficially made?—The Act alluded to is the 10 Geo. III. c. 51., and is better known in Scotland by the name of the Chief Baron Montgomery's Act; it is a very useful statute; it has been, with all its defects, very useful to Scotland, and has enabled many heirs of entail to execute improvements which might otherwise never have been made. It has been acted upon in a variety of cases. I have taken advantage of it to the full extent of its powers in my own case, where I am a trustee under a marriage settlement, whereby a considerable estate in Scotland is vested in me, and in which instance it would have been impossible to have executed considerable improvements, namely, in repairing the mansion-house and in building farm-houses and other necessary buildings connected with the improvement of the farms, in enclosing, planting, draining and so on, unless such a power had existed; the proprietor of the estate having succeeded to it under the strictest limits of a Scotch entail, and he was so circumstanced that it would have been impossible to execute the necessary improvements without such a power; and if such a power had not been acted upon, great injustice would have been done to the younger children, by applying the surplus profits of the estate to the improvement of that which by the entail must have all gone to the eldest child. But advantage was taken of the Act alluded to, and all the improvements have been charged upon the estate, and that amount of expenditure so charged has been settled upon the younger children; that is by no means a solitary instance, for in many other cases which might be named the same course has been pursued.

1120. In applying a similar law to Ireland, are there any inconveniencies connected with Ireland which you think it would be impossible to avoid?—It ought to be borne in mind, that the law of entail as it exists in Scotland, materially differs from the law of entail as it exists in the other two parts of the United Kingdom. In Scotland an entail cannot be got rid of in the same manner that it can be got rid of either in England or Ireland; it therefore became absolutely necessary that some power should be vested in the heir of entail in possession, or, in other words, by which the tenant for life in Scotland should be empowered to make such improvements, and to charge them as I have described, otherwise the improvement of the country would have been entirely checked; and I believe it is generally acknowledged by all who are intimately acquainted with this part of the country, that the Act has been very beneficial in its results up to a certain extent. There can be no difficulty, as it appears to me, in applying the same condition to a life estate in Ireland. The only question would be, whether the same necessity for doing so exists in consequence of the power of docking the entail from time to time which exists there, when the power of charging in favour of improvements might then be had recourse to, and other powers obtained, suited to the circumstances of the estate and the condition of the family; and in this case the law of Ireland appears to me to possess an advantage over the Scotch statute, inasmuch as the latter has a very early limit to its operation, in consequence of the amount which may be so charged on the entailed estate being confined to four years' free rent for improvements, and to two years' free rent for repairs to the mansion-house. In each case one-fourth of the amount of such outlay is paid by the heir of entail in possession, and the remaining three-fourths only is chargeable on the estate. I see no difficulty,

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however, in that being done, provided it should be thought expedient to grant them such a power; at the same time I am no judge of what sort of machinery could be applied in Ireland, in order to ascertain whether the improvements were such as ought to be made, and whether they were likely to be beneficial to the estate, and in what manner they might be made available securities, either in favour of younger children or for any other purpose that might be deemed advisable. In Scotland the heir of entail in possession, in order to avail himself of the benefits of the statute, must give notice in writing of the nature of the intended improvements to the remainder man next after any heir of his own body, three months before they are begun; but it must be remembered, that from the nature of a Scotch entail, such remainder man has a substantial vested interest in the estate, which cannot be defeated; he has an interest, therefore, to see that such improvements are likely to prove beneficial to the property, and that they are substantially executed. Not so in an estate tail in England or in Ireland, for, generally speaking, the interest of such a remainder man is too contingent to make him care whether such improvements are either the one or the other, the probability being that the estate tail is put an end to by the tenant for life and the next tenant in tail cutting off his future and contingent interest entirely. This distinction would have to be attended to.

The principle of the Chief Baron Montgomery's Act has been extended to other similar cases by various statutes; for example, by the 1 & 2 Will. IV. c. 43., being the general Turnpike Act of Scotland, heirs of entail in possession may charge their entailed estates, to the amount of one year's rent, with any subscription towards making any Turnpike Road beneficial to the estate; and in like manner in certain counties in the North, they were enabled by other Acts of Parliament to charge their entailed estates with the assessments laid upon them by the Commissioners for making Highland Roads and Bridges; and, in conclusion, one important remark must be made, that however beneficially this power operated at first, it has latterly been attended with many drawbacks, as it has loaded these entailed estates with a permanent debt that cannot be got rid of; this is no doubt occasioned by the nature of the Scotch law of entail, to which the Irish law would not be subject. This inconvenience was attempted to be met, in the case of the Highland Road assessments, by giving the heirs of entail a power of sale to pay off such incumbrances. If, therefore, such a power as that contained in the Scotch statute is less required in Ireland, it would, if obtained, prove ultimately less injurious to succeeding proprietors and the country.

William O'Brien, Esquire, a Member of the Committee; Examined.

W. O'Brien, Esq. M. P.

1121. ARE you acquainted with the administration of the Grand Jury laws in Ireland?—I have studied them with some care, and have had the opportunity of witnessing their administration in the counties of Clare and Limerick.

1122. Have you any suggestions to offer by which, in your opinion, the present Grand Jury system can be rendered more efficacious in the promotion of Public Works in Ireland?—Having had an opportunity of observing the defects of the present Grand Jury system, I have been led to consider in what points it is susceptible of improvement; and as above 400,000*l.* per annum is expended annually upon Public Works in Ireland under the control of Grand Juries, it may not be altogether foreign to the inquiry in which the Committee is engaged to receive suggestions as to the mode in which this large expenditure can be placed under the most economical and effective management.

The first alteration which I consider necessary in the present Grand Jury system is a change in the constitution of Grand Juries and of Road Sessions, by which they shall be rendered representative bodies, instead of being, as at present, nominated by individuals. Until this change be made, Grand Juries will never enjoy the confidence of those who pay the county cess, nor will there be that sort of responsibility which ought to be required from all those who are entrusted with the control and administration of the money of others. To the want of this representative character may be attributed the universal belief which prevails, that Grand Juries are swayed by motives of a partial and personal kind, and that the public money has been misapplied for the benefit of individuals. The same feelings which have raised so great an outcry against corporations, operate with equal force against the nomination system in the case of Grand Juries. I am of opinion, therefore, that the criminal functions of Grand Juries ought to be separated from their

their fiscal duties, and that the latter should be entrusted to a representative body, which Mr. Wyse and Mr. Musgrave have proposed to call a County Board.

The next alteration which appears desirable is, that the powers of Grand Juries, or rather, of County Boards, should be considerably enlarged. If the County Boards were properly constituted, there is no sort of public expenditure of a local kind which might not be beneficially placed under their control. They should be authorized to raise money for many descriptions of public works to which the powers of Grand Juries do not at present extend, such as the construction of piers, canals, railways, the deepening of rivers and the improvement of harbours. They might also be authorized, if a system of poor laws were adopted, to raise money for the reclamation of waste lands by the establishment upon such lands of poor colonies similar to those of Holland.

The third alteration required is, that a more permanent character should be given to the County Boards than that possessed at present by Grand Juries, which, from their fleeting constitution, are not adapted to the discharge of any duties of a continuous nature. With this view the County Board ought to be elected for a definite period—say for a year—and they should have the power of naming executive committees, with authority to act in the intervals between the meetings of the County Boards. These committees should be entrusted with the superintendence of the various branches of the county expenditure, in the same manner as the management of the gaol is now confided to a board of superintendence. If it should be thought expedient to enact laws for the employment of the able-bodied poor, the intervention of such committees would be most useful in carrying this object into effect. A committee being appointed in each barony for the purpose of superintending all public works within the barony, a power might be given to the parochial administrators of the poor laws to send any able-bodied labourer applying for relief to the baronial committee for the purpose of being employed upon the public works in progress under its superintendence. In such case the parish sending the labourer to the baronial committee for employment should be bound to contribute towards the relief of the county rate a portion of his wages during the time that he was so employed.

I have long thought that the office of county treasurer might be abolished, and that the large balances now in the hands of the county treasurers should be placed in the county branches of those banks, of which the stability is unquestionable. By the abolition of the office of treasurer, the salary of these officers would be saved, the counties would receive an interest on their deposits, and the public money would be placed in a state of greater security. All the duties at present performed by the county treasurer might hereafter be performed by the secretary to the Grand Jury, whom a small increase of salary would amply compensate for the additional trouble. This change, however, ought not to affect the present treasurers of counties.

By the proposed appointment of permanent committees of superintendence, much of the present machinery of the Grand Jury system would be rendered unnecessary. In particular, the second meeting of the Special Sessions required by the Grand Jury of 1833, and which has been productive of nothing but inconvenience, might be avoided.

The suggestion made by Mr. Mahony, that Grand Juries or County Boards might be empowered to issue debentures in the nature of Exchequer Bills, appears to me to deserve adoption.

There are various other matters of detail into which it would not be right at present to enter, but which might be engrafted with advantage upon any Act for the amendment of the Grand Jury laws. In order to frame a perfect measure, it would be necessary to consolidate into one Act the various laws now in force relative to the powers and duties of Grand Juries. It would also be desirable to couple with such an Act a variety of collateral measures, having for their object the internal improvement of Ireland. The organization afforded by such a body as the Irish Grand Jury or County Board, might, if it were well constituted, be made most useful in carrying into effect a great number of objects of public utility; and I may be allowed to express a hope that the Irish Government will be prepared to bring forward, early next Session, a series of well-digested measures, having in view the employment and relief of the poor and the general improvement of our local institutions.

1123. Have you any suggestions to offer respecting the reclaiming of waste lands?—I would only wish to express a strong opinion in confirmation of the suggestions which

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which were made by Mr. Mahony, that there should be a power given to the proprietors of lands which are tied up by settlement of laying out money in the improvement of their estates, under proper check and control, and of charging the inheritance with a certain portion of the expenditure required for these improvements. There might also be coupled with any system providing for the employment of the poor, a power to Grand Juries or to County Boards of raising money for the purpose of establishing poor colonies of the nature of those in Holland, for the purpose of reclaiming waste lands and giving employment to such individuals as could not find work in their respective parishes. I think the description of land which the Grand Juries, under these circumstances, might be empowered to purchase, ought to be such as does not exceed in value a certain yearly rent. The Grand Juries should have the power of appointing permanent committees to superintend such colonies, and eventually, the committees under the sanction of the Grand Juries, should have the power of selling small allotments of these lands to such of the industrious poor as had by good conduct and frugality during their residence in the colony been able to obtain a sufficient sum of money to pay the original purchase money with a fair proportion of the expense incurred in the reclamation of these lands.

Colonel *John Fox Burgoyne*, called in; and further Examined.

Col. *J. F. Burgoyne.*

1124. ARE you of opinion that any beneficial alteration could be made in the management of the loan fund for Public Works in Ireland?—The Commissioners have frequently consulted upon the arrangements of the loan fund, and we are of opinion that a modification might be made in them to great advantage.

The operation of the provisions of the Act as it at present stands is, to advance 500,000*l.* in Exchequer Bills in loans, at interest sufficient to cover the expense; the principal being re-issued in new Exchequer Bills, as it shall be repaid, and old bills to the same amount paid off; so that there shall never be more than the 500,000*l.* outstanding on this account, either in debts or in Exchequer Bills.

The public becomes merely the guarantee for the value of the Exchequer Bills and their interest; and is intended to be secured from loss by the stipulations in the Act.

By the system as now in operation, there is an apparent gain by the public to the amount of the difference of interest taken from the parties borrowing and that paid for the Exchequer Bills, but that is not the case; for every repayment of principal reduces the interest received, while that paid is going on till the Exchequer Bills are paid off.

Thus, suppose an advance be made to a Grand Jury of 10,000*l.* at 4 per cent.; the Exchequer Bills bearing an interest of 3 per cent., there would appear to be a profit on the transaction of 100*l.* per annum; but that description of loans being necessarily paid off in ten years, and frequently voluntarily in five; let us suppose the latter; then 2,000*l.* being repaid by the end of the first year, and 2,000*l.* more by the end of the second, the interest received will be successively 400*l.*, 320*l.* and 240*l.*, making in the three years (when the Exchequer Bills are paid off) 960*l.*; that is, only 60*l.* over the amount paid, instead of giving 300*l.* gain, as is commonly supposed.

The same effect is more or less in operation in almost all the loans.

By the system which I would suggest instead, the public might be not only equally secured from loss, but even a profit might be expected from the operation, provided such profit, as is reasonable, should be entirely appropriated to the encouragement of the same useful objects.

The proposition is, that the Exchequer Bills should bear uniformly an interest of 2*d.* per day, or 3*l.* 0*s.* 10*d.* per annum.

That advances should be made at from 3½ to 5 per cent. interest, according to the circumstances of the case.

That sufficient funds should always be reserved and forthcoming to pay the interest on the Exchequer Bills, and that the whole of the remaining principal or interest received be again immediately re-issued in advances on account of loans, the Exchequer Bills being from time to time renewed instead of being paid off.

By this means those Bills will, from an assurance of renewal, be more valuable and useful, and the whole fund will be in a constant state of activity and productive. There will never be more than the proposed original amount (whatever that may be) in Exchequer Bills outstanding at a time. There will be a greater extent of funds available for loans by the more rapid circulation, and the public will have

even

even better security from loss than at present, as it may be hoped that the excess of interest and the constant fructification of the whole of the funds will more than cover the losses that must occasionally occur in spite of every precaution, and that the fund will rather increase than otherwise.

Such a system will have the additional benefit of removing any impression of undue advantages being taken in favour of Government in the terms required from the borrowers, since the profit, if any, to whatsoever extent, will be appropriated to the advantage of the country in forwarding similar objects of utility.

This plan would contemplate the gradual reduction of all the Exchequer Bills issued at 2½*d.* per day interest, as they shall fall due, to others at 2*d.*

It might be advisable that the Board should in all cases negociate the Exchequer Bills, and make the advances in money, by which means the amount of premium would be added to the general fund, the operation would be simplified to the parties borrowing, and the advances could readily be made in any small or odd sums required.

In this way loans might be made with advantage to the full extent of the demand, subject only to a restriction in the issue of Exchequer Bills to an amount not exceeding what might be advantageous to the monied and trading operations of the community.

Should the fund be found at any time to exceed permanently the demand upon it, an amount in Exchequer Bills might be bought up with such excess, in order to save the interest that would otherwise be paid without a return; and, on the other hand, should the demand for loans exceed what might be thought right to issue in Exchequer Bills, it is presumed that some standing fund which the Government could command at about the same interest of 3 per cent. might be appropriated to make up the requisite amount.

1125. What do you consider to be the amount of the fund that would enable you to supply the applications made to you from time to time for loans?—We have found by experience that 500,000*l.* was not adequate, but I consider that 1,000,000*l.* would suffice for the purpose; the working of a million of money in the way I propose, I think would produce about 70,000*l.* per annum for expenditure upon public works.

1126. Do you think you would always have 70,000*l.* ready for applications during the year, if you had a million?—Precisely.

1127. Upon what do you found that opinion?—Upon the average rate of repayments hitherto; some are made in five years, some even in less, and some in more. I made a rough calculation, supposing the whole million to be expended at the same rate as the 500,000*l.*, that the repayments would come in at about that amount of 70,000*l.* a year.

1128. Will that 70,000*l.* a year answer the demand upon you for public works, in your opinion?—After the expenditure of a million, I think it would.

1129. Would you expend the million immediately or by instalments?—It has taken three years to allot 400,000*l.* in loans for public works, and I think it might take three or four years more to distribute the rest.

1130. And after that you think the repayments would be according to the rate of about 70,000*l.* a year?—Yes.

1131. Would it not be a good sign, a sign that the country was improving, if the demands for loans of this description were to increase beyond a million?—No doubt.

1132. The million would not be lost to the public, it would still remain a loan to be repaid when it was no longer wanted?—It would be out in good debts upon good security.

1133. And Parliament would have the power to claim it at any time?—It might be resumed at the expiration of the several terms stipulated for by the borrowers.

1134. Do you contemplate in that million any money to be employed in the improvement of the navigation of the river Shannon?—Certainly not; I consider the Shannon a great separate work of itself, and entitled to a separate consideration altogether.

1135. Do you not think it entitled to national consideration?—I think it peculiarly so.

1136. In your opinion, ought not the funds applied for on what is called the "moiety grants" also to be enlarged and increased?—I think all money given for useful public works in Ireland is attended with the greatest possible benefit to the empire at large.

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1137. Has not the money you applied under the provisions of the Act in the way of grants, and advancing a moiety for making roads, been productive of great advantage?—Yes, I consider of greater national advantage than even the loan fund.

1138. Would you not increase the amount to be so advanced, and would you not increase the objects and purposes for which the money should be advanced?—The 50,000*l.* already allotted to grants is now exhausted. I would enlarge the objects to which it is applicable, and, as I said before, I think it would be more useful to replace that than even the loan fund.

1139. To what amount?—To another 50,000*l.* for the present.

1140. Would it not more tend to the interest of the country to lend money at a low rate of interest with a long period of repayment, than to ask for a gift from Parliament, unless in such cases where individuals have advanced a great deal of money?—There are many kinds of work for which no loans will be demanded, which are extremely useful, and which can only be carried into execution by grants.

1141. Name one?—The roads through extensive uncultivated districts; there is no party will come forward to contribute towards them in any way, and yet they are more useful than any other species of work.

1142. Why?—They are more useful, because they add to the empire profitable and excellent land, to the amount of hundreds and thousands of acres, as much as if they had arisen out of the bottom of the sea.

1143. Are there not many districts in Ireland capable of much improvement, requiring at this moment such roads to be made, and having no other obstacle but the want of means?—There are many without any existing means for carrying the improvements into execution; no party is sufficiently interested to come forward; the interests are so blended and so limited that no person sees the particular advantage he would gain, and it is only by Government that it can possibly be done.

1144. Do you think there are obstacles which occur in those districts that do not occur in England, so as to prevent the making of roads?—No districts in England or Scotland can be compared with them at all; from the extent of the wastes and the mixture of interests, nobody can foresee who will derive any considerable advantages from the improvements; the landlord or proprietor for many years would get little or nothing from them, yet the gain would be very great to the country, and generally to the empire.

1145. Do not those difficulties occur in a great degree from the nature of the tenure in Ireland, the remoteness of the interest of the landlord, and the precarious tenure of the occupying tenant?—My idea is that nobody gets the benefit of the improvement for many years, but the immediate occupier, who for a long period could afford to give no rent, or only a nominal one.

1146. Then there would not be any return of capital to the proprietor of the estate, to induce him to lay out a sum of money on such roads as you mention?—There would not, except remotely; the only parties who would gain by it would be the Government, by the improvement of the revenue, and the poor people who become the occupiers, and who would be from a class having now hardly means of subsistence.

1147. Who have no means, consequently, to contribute to such improvements?—Who have no means, but on the contrary, are in great want of such an opening for increased employment.

1148. Do not difficulties also arise in Ireland from the embarrassed state of some of the landlords to whom these districts belong?—In Ireland I believe more than in most countries, the landed proprietors are without the means of assisting to promote improvements, that would be even profitable to their estates.

1149. You have mentioned that the immediate gainers by the formation of the roads, would be the peasantry of the district, who occupy little lots of land on the side of the road; upon what terms would they become possessed of those lots?—They could only have them by the leave of the proprietors of the land.

1150. Are you aware how lots of land are taken into cultivation on the side of the roads?—They are taken on different terms, from different landlords; some taken upon hard terms, and some which I think is the better policy, on easy terms, giving the tenant a greater interest in the improvement he shall effect, but eventually benefiting the landlord.

1151. If the public are to be called upon to make grants to a large amount for the purpose of opening these uncultivated lands in Ireland, would it not be fair that the public should stipulate with the owners for some favourable terms to the peasantry, who will proceed to cultivate the land and lay out their labour on their land

land in the neighbourhood of the road; as for example, by allowing them to have a lease, at a nominal rent, for a term of years, it being for the benefit of the peasantry in a great degree that we propose to make the grant?—Any regulations that would secure the best possible provision for the peasantry would be very desirable, but I do not quite understand how you could legislate for such a purpose.

1152. Are not the persons who occupy lands in the neighbourhood of these roads entirely at the mercy of their landlords, and might they not be turned out a year after, though they may have laid out their labour upon the land?—That is the case, I believe.

1153. Is that universally the case?—I believe, in point of fact, in many cases it is even worse, and that a high rent is put on land thus settled upon; a rent which it is impossible can be paid out of the produce, but has to be sought from other sources; it consequently usually gets into arrear, and the unfortunate man is completely at the mercy of his landlord. I do not mean to say that is the general case.

1154. In your opinion, would not that mischief be very much obviated, and very much lessened, if the number of roads was increased in Ireland, and thereby the quantity of land brought into cultivation increased?—No, I do not know how that would influence the conduct of the landlord.

1155. Would there be the same demand for land?—There is such a mass of population without provision now, that one can hardly say when there would not be a great demand for land.

1156. Is the committee to understand that you mean to say that all the tenantry in Ireland are at the mercy of their landlords, who are prepared to take every advantage of them?—Decidedly not. I mean it as an exception, but one that very frequently occurs.

1157. Are not the advantages which you anticipate as likely to result from the general introduction of new lines of road much more extensive than those which would result to the occupiers of land upon the immediate neighbourhood of the roads; is it not rather to the general effect produced on the prosperity of the country than the immediate occupying tenants on the line of the road?—I anticipate benefit to a poor class of occupying tenantry, and the advantage of increased resources and prosperity to the country.

1158. You do not confine the advantage to what may be called the consideration of the interest of those who live on the particular line of road; but that interest would only form one part of the advantage gained to Ireland?—The introduction of these roads would produce a great improvement over the whole face of the country, but I consider that the direct advantages, if fairly distributed, would go entirely to the occupiers, giving for the first ten or twenty years a very small benefit to the landlords, after which they would get the full advantage of the improvements.

1159. Would there not be a difficulty in empowering the Board of Works, before opening a road across a tract of distant country, to require the owner of the land to grant out lots of land at the side of the road, when finished, to tenants upon lease for a term of years at a moderate rent?—I am contemplating lines of road twenty or thirty miles in extent. It would be difficult to ascertain the boundaries of properties where roads are made over such an extent of waste as that.

1160. Do you mean to give the Committee to understand that Government makes roads through these large districts of country without having obtained from the proprietors of those districts of land permission to make these roads?—In the districts contemplated the undertaking is too great a boon to require any permission. Every body may gain, no one can suffer.

1161. Do they not know the proprietors?—In many cases, where they traverse large tracts of bog and wild parts of the country, they do not know the proprietors; there is one class of grants of a moiety of the expense, the other half being provided by Grand Jury assessment; in that case, the presentment not being traversed, implies the authority of the proprietor to carry the road through his ground. Where the roads have been made by the entire grant of Government money, which has been usually in times of distress, as in 1822, when there was a great demand for labour for the population, who were starving, the works were begun without many inquiries as to the property, or any remonstrance made against them. Those works have since been finished, or are in progress of being finished, by a grant of the last Session of Parliament.

1162. Your objection, then, consists in the difficulty of finding the legal owners

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and making terms with the legal owners of the improved lands; but would it not be possible for the Legislature, in making these grants, to declare that the settlers on the land at the road-side should be entitled to certain favourable terms from the owner, whoever he might be?—I think it would be a most desirable regulation if it could be carried into effect; but the road would go through such a variety of lands, some more and some less capable of improvement, that what might be reasonable in one case would be a hardship in another, and it would be difficult to define in any regulations precisely the ratio of the terms to be required.

1163. Would it not be interfering with the rights of property?—I do not know that it would be an unreasonable interference. If property is made available solely by public expenditure, the public would have some right to stipulate for certain terms as the condition.

1164. You say, if it could be done without difficulty, you think it would be desirable; what are the difficulties you contemplate?—I think they would be very great; the part near the cultivated ground would be worth some kind of rent earlier than that far off in the interior, and ought to have different terms. Varieties of soil and situation would make the circumstances so different that no general rule would apply.

1165. Could not some local tribunal, commissioners or petty sessions, or some other local authority, determine the value of the rent that should fairly accrue from time to time to the landlord on this improved land, to prevent the tenant being robbed, by ejectment, of the value of the improvement?—If such a regulation could be made to work, it would be very desirable and very proper, but I think it would be difficult.

1166. Should you be afraid to trust the working of it to private arrangement, to the natural arrangement between the occupier and the landlord, or should you think the interference of some tribunal necessary?—I think some interference would be very desirable, but it appears to me very difficult to effect it.

Lunæ, 18° *die Maii*, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *John Fox Burgoyne*, called in; and further Examined.

Col. *J. F. Burgoyne.*

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1167. HAVE you any further statement to make to the Committee?—Some questions having been put to me during the former examination on certain matters of fact, which will be best shown by detailed returns, I beg leave to lay before the Committee the following Papers:—

1. A Statement of all the Loans made by the Commissioners up to the 1st January 1835, showing the amount of Repayments on account of each.
2. Aggregate Statement of the Loans and moiety grants classed in the order of the description of works for which they were advanced, including those approved of, but not definitively arranged.
3. Return of the Expenses incurred by the parties for the investigations by Engineers on the part of the Board.
4. Extracts from a Report on the small Fishery Piers on the coast.
5. Particulars of the present state of the Loans made by the late Commissioners under the 57th Geo. III. and subsequent Acts.

(*See* Papers delivered in to the Committee, Appendix, No. 3.)

John Strettell Brickwood, Esq., called in; and Examined.

J. S. Brickwood, Esq.

1168. ARE you secretary to the Exchequer Loan Commissioners for Public Works?—I am.

1169. When was the first advance made by Government for the purpose of loans for Public Works?—In June 1817.

1170. What was the amount then advanced?—A million and a half.

1171. Has that grant been subsequently increased?—It has on several occasions.

1172. To what amount?—To the amount in all of 5,300,000*l.* I ought to say the allotment was to the extent of 5,500,000*l.*, of which, 200,000*l.* was deducted in the year 1827 to be applied to Ireland, under the direction of the Exchequer Loan Commissioners, leaving 5,300,000*l.* to be applied for Great Britain.

1173. Have

1173. Have you advanced the whole amount to persons desirous of borrowing for Public Works?—Toward the close of the last Session one million, making up five millions and a half, was allotted, and that chiefly remains on hand, not yet issued.

1174. The rest is issued?—Yes, issued, or granted ready to be advanced on the completion of the securities.

1175. What was the nature of the Public Works on which such sums have been expended?—I might mention every kind of works; canals, drainage, public roads, harbours, gaols, &c.

1176. And has such application of money been found beneficial?—Very extensively beneficial; I believe universally allowed to be beneficial.

1177. How much of the sum so advanced has been already repaid?—As near as my memory serves me, 1,900,000*l.* I have a memorandum which will tell correctly. The first allotment was by the 57 George 3, chap. 34, one million and a half. The next was 3 George 4, chap. 86, two millions. The next was 1 & 2 William 4, chap. 24, one million. And, lastly, by the 4 & 5 William 4, at the close of the last Session, one million; 200,000*l.* was deducted, to be allotted for Public Works in Ireland, in the year 1827. The total amount for distribution in Great Britain was 5,300,000*l.*; and there is appropriated of that sum 4,561,250*l.*, leaving unappropriated 738,750*l.* The total of applications decided for Great Britain is 12,118,774*l.*; on which applications there have been apportioned for canals, rivers, drainage, 1,298,100*l.*; harbours, docks, 312,000*l.*; bridges, ferries and Thames Tunnel, 464,300*l.*; the money for the Tunnel being advanced under a special Act of Parliament.

1178. What was the amount advanced for the Tunnel?—Thirty thousand pounds has been advanced; and a further amount of 216,000*l.*, apportioned to be advanced under certain regulations, if authorized from time to time by Treasury warrant. There has also been advanced for fisheries 33,700*l.*; water-works, 27,000*l.*; roads and railways, 544,800*l.*, and 419,600*l.*; together, 955,400*l.* Improvement of cities and towns, 701,050*l.*; collieries and mines, 303,700*l.*; churches and parish relief, 90,000*l.*; colleges, 108,000*l.*; law courts, gaols, asylums, &c. 267,900*l.*; total, 4,561,250*l.*; interest received, 867,086*l.* 15*s.* 10*d.*; principal, 1,982,131*l.* 9*s.* 11*d.*; principal outstanding, 2,305,218*l.* 10*s.* 1*d.*; current average rate of interest accruing on the loans, 4*l.* 2*s.* 9*d.* per cent.; current expenses of the commission, under 3,000*l.* per annum; current difference of interest receivable on loans and payable of Exchequer bills, 30,000*l.* per annum, and upwards.

1179. Have any losses been incurred in respect of those advances?—There have been some losses; I am not at this moment prepared to say the exact amount, but nothing but what is far more than covered by the current profit of the commission.

1180. What do you mean by the current profit?—The difference between the rate of interest paid by Government on the Exchequer bills, and the interest paid by the borrowers on the loans they receive.

1181. What is the rate of interest paid by the borrowers?—There is about 760,040*l.* at five per cent. interest per annum, and 7,775*l.* at four-and-a-half per cent.; 1,193,150*l.* at four per cent.; 94,300*l.* at three-and-a-half per cent.; 140,100*l.* at 3*l.* 0*s.* 10*d.* per cent., the current rate of Exchequer bills, and 38,900*l.* at three-and-a-quarter per cent.; making an average of 4*l.* 2*s.* 9*d.* per cent. payable on the loans.

1182. Is not the benefit so gained much more than sufficient to answer the losses that have been sustained?—I consider it far more than sufficient to answer the losses.

1183. Then do you think it was necessary for Government to stipulate for so large an interest?—Not merely for the bare protection of the public money; at the same time, it is to be borne in mind that losses to a greater extent might have occurred, and such liability ought to be amply provided for by the surplus interest.

1184. Does not experience now teach you that the interest so obtained has been more than sufficient to cover all the losses?—It has led to that conviction.

1185. And also the expense of management?—And also covering the expense of management. I should say further, that the current profit now is considerably more than 30,000*l.* a year, and the current expenses of our commission are less than 3,000*l.* a year.

1186. So that, in point of fact, Government are money-lenders and great gainers by the loans?—Yes, they are great gainers by the loans.

1187. In your opinion, if sufficient precautions were taken, as I suppose might

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be taken against losses, would not a much lower rate of interest be sufficient for the Government to ask in respect of loans for public works?—Doubtless a lower rate of interest might be taken safely; I would not say a much lower rate.

1188. Do you think that Government ought to require more than they themselves pay for the money so advanced?—I see no objection to it; I think they ought, for this reason: If the Government capital were to be employed at a low rate of interest, it might interfere with the employment of individual capital throughout the kingdom, and leave bankers' capital and the capital of other monied individuals unemployed, those individuals not being able to advance the money and take repayment by instalments so conveniently as the Government are enabled to do.

1189. Your observation, then, applies to English loans?—It does.

1190. Where capital is overflowing?—Yes; I do not intend to extend the observation to Ireland.

1191. Would not, in your opinion, one per cent. over and above the interest paid by Government be sufficient for Government to require to cover all losses?—It seems requisite that it should be borne in mind that it is more easy to reduce interest than to raise it. The interest of money generally is now at a low rate, but circumstances might arise to increase the general rate of interest. It appears to me rather desirable to keep the interest a little higher than is necessary at first, in order to give an opportunity of lowering it if expedient, considering that you might not be able easily to raise it, if it were desirable.

1192. At what rate does Government raise money for the purpose of those loans?—Those loans are issued in Exchequer bills bearing 2*d.* per cent. per diem, which is 3*l.* and 10*d.* per annum, which Exchequer bills, at the end of the first year, are usually exchanged for the common Exchequer bills bearing interest at the rate of 1½*d.* per cent. per diem, which is 2*l.* 5*s.* 7½*d.* per cent. per annum.

1193. Why may not Exchequer bills be issued in the first instance at that rate?—Government have generally been desirous to keep the different kinds of Exchequer bills separate, to distinguish the Public Work Exchequer bills on the first issue from all others.

1194. Is there any reason for that?—I have never heard any satisfactory reason for that.

1195. That money might be borrowed at the rate of two-and-a-quarter per cent. on Exchequer bills?—I think so.

1196. Is there any difference in the premium?—There may be a difference of 4*s.* or 5*s.* per cent. occasionally, but not always a perceptible difference in the market.

1197. Do you negociate the Exchequer bills, and then advance a specified sum to the individuals borrowing, or do you issue the Exchequer bills in favour of the individuals borrowing, and leave the premium to them?—We never interfere with the negociation of the Exchequer bills; we deliver out to the borrower an order signed by three commissioners upon the officers of the Exchequer, who issue the Exchequer bills to the bearer of that order; we never issue the Exchequer bills.

1198. The parties borrowing are not accountable to you for the amount of the premium, whatever it may be, which they obtain upon the sale of Exchequer bills?—No, but by an arrangement made afterwards, we have recently made them so in some instances; in those instances where they have applied for the reduction of interest.

1199. Do not the monies repaid go into the Consolidated Fund?—Yes, first into the Bank of England, and then they are transferred into the Consolidated Fund.

1200. You say you have 700,000*l.* now remaining?—Yes.

1201. Do you expect any further grant to be made when that is expended?—The intention of allotting that money was to apply a part of it for the purposes of the Poor Law Amendment Act, the extent of which cannot yet be foreseen; therefore it is not easy to say how much may be required for that and other purposes, nor what time may be occupied in applying the whole of it; but it seems likely that on the exhaustion of the present million, more will be allotted.

1202. Have advances been made from time to time whenever required, to the amount you have mentioned?—Yes.

1203. Do you find the interest in all cases punctually paid?—Generally, with few exceptions.

1204. To what extent have you found a deficiency in the punctuality of payment of the interest?—I am not prepared to answer that off-hand.

1205. In reference to the repayment of these loans, what time are you in the habit

habit of granting?—The Commissioners usually require them to be repaid by annual instalments within 20 years.

1206. Does the Treasury assume the power of extending that period?—There is an express enactment, giving power to the Treasury for the reduction of interest, and the extension of time.

1207. Has it been the practice to extend the period for repayment?—Not by any means the general practice; such extension has been granted in some few instances.

1208. In those cases in which the interest has not been punctually paid, it is obvious there can have been no payment of principal?—All monies received are applied first to the discharge of the interest, before the reduction of the principal; invariably.

1209. What is the nature of the security upon which you are in the habit of granting loans?—The mortgages of tolls, dues or other income, arising or to arise from the public works, and of all property connected therewith; and if the Commissioners are not satisfied of the adequacy of such security, they occasionally take personal bonds by way of collateral security.

1210. They do not take personal security, or the security of mortgages, on estates of individuals, except in those cases where the parties borrowing are to derive a particular benefit to themselves from the undertaking?—I would not say that distinction is always kept up. The following is not an unusual question, amongst others put by the Commissioners for Works, whether the applicants are to receive individual benefit from the undertaking or not, upon receiving applications for loans, "Will the parties be ready to give their personal bonds as a collateral security should the Commissioners not be satisfied of the adequacy of the tolls, dues or other securities offered?"

1211. It has been suggested to the Committee, that there would be no objection to Government doing as some of the companies in London are now said to do, namely, to advance money upon a fluctuating rate of interest, so as to meet the objections you have urged against the granting loans on a low rate of interest; do you yourself see any objection to such a course?—I see no objection to that course, but it is not applicable to the provisions of the Exchequer Loan Acts.

1212. Are loans made to defray the entire expenses of the public work, or what is the largest proportion of advance made?—There have been instances where the whole amount has been lent, but the usual proportion we issue is limited to one-third. If it be a work which has been undertaken as a speculation on the part of a number of individuals, such as a canal, we should require them to expend at least two-thirds of the estimated cost before we advance one-third; but for the building of a county session house or county gaol, which was clearly for the public benefit, without speculation being mixed up with it in the slightest degree, we have in some instances advanced the whole amount required, taking a security upon the county rates, which seemed to shut out all risk of loss under any circumstances.

1213. Would you not be equally satisfied with existing tolls or dues as county rates?—It depends upon the nature of the work.

1214. For example, docks and quays?—There speculation mixes up with it; they might be reduced by the necessary repairs, or a rival undertaking; all circumstances of that nature are taken into account by the Commissioners.

1215. As soon as the funds allotted for the purpose of the commission have been exhausted, have other funds been provided at once and without difficulty, or have you been ever without funds?—We have occasionally remained with a very small balance of funds in hand for a considerable time.

1216. Among the particulars of the loans you have mentioned, there are loans for fisheries; what description of loan are you in the habit of granting for the promotion of fisheries?—In the year 1817 distress existed in the country to a considerable extent; and one of the objects for instituting this commission was the employing the poor in any useful branch of industry; and one of the objects mentioned in the preamble of the Act was the encouragement of fisheries. It was only during the first three or four years that any loans were issued to fisheries, and they were all made repayable within a very short period.

1217. On what security were those loans issued?—Almost invariably upon personal security; the bond of the principal borrowers, with surety bonds.

1218. To what description of persons were the loans granted?—They were usually for small amounts, generally not exceeding 500 *l.* or 1,000 *l.*; they were fishermen, chiefly in Scotland, who gave their own bonds, with some responsible persons as their securities.

J. S. Brickwood, Esq.

18 May 1835.

1219. Is the Committee to understand there is no money at present outstanding on loans on account of fisheries?—There is none outstanding, with the exception of a very small sum, which is not likely to be repaid.

1220. What was the reason for your ceasing to advance such loans?—The objects seem to have been accomplished as far as it was deemed advisable at the time.

1221. Under the present mode of granting loans, the heaviest charges fall on the commencement of the work; it has been suggested to this Committee that it would be to the advantage of public undertakings if the repayment was effected by a uniform rate per annum throughout the whole time allotted for the payment; do you see any objection to such a course?—I see no objection to that course. It has been adopted in some instances by the Exchequer Bill Loan Commissioners in London.

1222. Do you think that that principle might be carried further to make it lighter in the beginning and heavier in the end, as for example beginning at five per cent. and ending at eight?—I fear it would be attended with this difficulty, that it would serve as an inducement to speculation, many persons undertaking works of this description, being desirous to postpone the payment to as late a period as they can; and it would increase the risk on the part of the lender.

1223. If the security was undoubted, would it not have the effect of encouraging parties to enter into such undertakings?—In some instances of large undertakings, which evidently cannot be completed within two or three years, the payment of any of the instalments has been postponed until the entire completion of the work, and then the whole payment has been spread over the years remaining out of the 20; that is within the discretionary power of the Board.

1224. In equal sums?—In equal sums as to principal; and I would submit, whether it might not be desirable to postpone all the payments of principal, and keep up the interest till the public work is completed to a sufficient extent to produce an income.

1225. What have been the nature of loans to individuals for the improvement of their estates?—In the early part of the Exchequer Loan Commission, power was given to advance loans for the support of collieries and mines, and that power was exerted in a few cases, carefully abstaining from lending money to extend works of that kind, and advancing the loans solely for the support of them, to prevent the labourers being thrown out of employment.

1226. Of the 200,000*l.* applied to Ireland, how much has been distributed, and how much remains at your disposal?—One hundred and ninety-three thousand and fifty pounds has been granted, which leaves a balance undisposed of, of 6,950*l.*, for which there is an application from one individual, Mr. Crommelin, to improve the harbour at Port Crommelin.

1227. Will you state to whom advances have been made, and the amount advanced?—This document contains the particulars.

[*The following Document was handed in*:]

TO WHOM GRANTED.	Amount of Loan agreed to be advanced.	Amount advanced.	Date of Advance.	Principal repaid.	Interest paid.	——
	£.	£.		£. s. d.	£. s. d.	Interest paid to—
Lord Bishop of Down and Connor -	10,000	10,000	15 June 1826	1,298 15 –	3,767 10 –	15 June - 1834
Trustees of Cork and Ballyhooly Roads	12,000	12,000	20 Dec. 1827	600 – –	480 – –	– Dec. - 1828
Commissioners of Courtown Harbour	6,000	6,000	13 Mar. 1828	nil - -	nil.	—
Ditto - - - - - -	8,500	8,500	24 Apr. 1834			
Trustees of Cork Markets - -	10,000	10,000	22 May 1828	1,000 – –	975 – –	8 May - 1830
General Overseers for building Court House at Tralee - - - - -	9,350	9,350	16 Sept. 1830	8,107 4 10	1,028 10 2	1 May - 1835
Ditto - - Sessions House at Killarney	1,400	1,400	- - -	1,218 7 2	153 12 7	ditto.
Ditto - - Court House at Tullamore	9,800	9,800	19 Sept. 1833	669 11 –	311 9 –	1 Aug. - 1834
Commissioners of Tralee Harbour -	6,000	6,000	26 July 1832	600 – –	585 – –	4 Aug. - 1834
Ulster Canal Company - - - -	120,000	20,000	29 Aug. 1833	—	—	—
		20,000	– Apr. 1835	—	—	—
	193,050	113,050		13,493 18 –	7,301 1 9	
Allotted by Parliament, 6 Geo. IV. c. 35, and 7 & 8 Geo. IV. c. 47. -	200,000	86,950				
Undisposed of - - - £.	6,950					

Application from N. de la C. Crommelin under consideration.

1228. What

1228. What interest did the Ulster Canal pay?—Three-and-a-quarter per cent. is charged. The money for the Ulster Canal was issued under an express Act of Parliament, leaving the Exchequer Loan Commissioners no discretionary power. There is to be no repayment till it be completed, and it is only from the prospective income of the undertaking that the interest and principal are to be paid. *J. S. Brickwood, Esq.* 18 May 1835.

1229. When you mentioned that you were at times with a very small fund, did the delay in providing others arise from your having no demand upon the Commissioners for loans, or a difficulty in procuring the sanction of Government?—I do not recollect the cause of not receiving further allotments of the fund for distribution. I know applications continued to go on, but I do not recollect the circumstance that delayed the allotment of the money.

1230. The delay was not at any time very great?—No.

Mercurii, 20° die Maii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *Conolly*, a Member of the Committee; Examined.

1231. YOU are, I believe, a large landed proprietor in Ireland?—I am a large landed proprietor in the county of Donegal, the largest I believe; and there is not one-third of my estate cultivated yet. Colonel *Conolly*, M. P. 20 May 1835.

1232. Have you served frequently on Grand Juries?—Since the year 1808, without any interruption, but that occasioned by my Parliamentary duties. The county has been almost entirely opened by mail-coach roads, through the Grand Jury system, without borrowing one shilling.

1233. In your opinion, might not many more roads be made with great benefit to that county?—Many more are now in progress, and many more might be made, and are urgently called for.

1234. Does the Grand Jury possess the means of making those roads without the assistance of Government?—The Grand Jury have worked their funds with economy, and have been so careful of all their resources, that in the course of time they would be able to accomplish it; but certainly, advances from Government would quicken the operation, and improve the execution of the work.

1235. Would those advances be made without the least risk to Government?—Certainly, and with great advantage to the public, if the interest were only 3 per cent., because the profit arising out of the roads would be greater than the interest of the money. I consider that the value of all lands that have not been previously accessible, was doubled by the introduction of roads; there is a great road running across the county, which is nearly finished, where that effect has been produced, though the road is not quite completed. In a mountain town-land of my own, through which there is a road made, we found it difficult to let it for 21 years at 5*l.*; the road has been since made, at my expense, at 3*s.* a perch, and the half of the town-land has been charged with the whole of the rent by my tenant; a piece has been let off to another man, and 40*l.* has been given for the purchase of term; two good houses have been built by the new incomer; and at the end of the 21 years nearly the half of the town-land will be in arable.

1236. Does any part of your property border on the sea-shore?—Almost all.

1237. Would it not be very serviceable if small piers and quays were made at different places on the sea-shore?—There are three reasonably good harbours within ten miles of each other. We do not want small quays so much as we want a great harbour. I have within these two years expended nearly 3,000*l.* on one of the harbours myself. The quantity of sea-manure drawn up is enormously great, and it constitutes more than one-half of the value of the land.

1238. From this harbour you mention, are the means of communication sufficient at present?—We hope to have a railway of three miles to connect Lough Erne with the sea; for ordinary communication the roads are of good quality, and are reduced to the mail-coach level; the mail-coach travelling six Irish miles an hour.

Colonel *Conolly*, M. P.

20 May 1835.

1239. Would it not be serviceable if power was given to Grand Juries to raise money for the purpose of building small harbours and quays along the shore?—Throughout the various parts of the county of Donegal it would be highly serviceable; upon the particular part of my coast I do not think it is called for, but on the lower estate, below Killybegs, it would be highly useful, the fishery there being of incalculable value. Some piers have been built upon Lord Conyngham's estate, and have been very useful. There have been no very great sea fisheries till 1830 for about 30 years; at that time they were obliged to spread the herrings on the land for manure, from the inability to convey them up the country. In 1833 they always got from 5*s.* to 7*s.* 6*d.* a thousand, an ample remunerative price to the seaman; and, generally speaking, the herrings were sold at double the cost paid for them from the shore, so that there was a double profit, and they were run 40 miles into the country, and sold fit for use or salting.

1240. Is that by means of roads?—By the improvement of roads and carts. I estimate the value of the last fishery at 50,000*l.*, and I found my estimate on the monies paid to the different agents through the country, which I am satisfied could not otherwise have been discharged.

1241. You have already alluded to the great benefit arising from roads; has it not also occurred to you in your experience, that a great benefit might also be derived from the lowering of rivers and the improving of the inland navigation of the country?—Yes, I have already stated, that in levelling the roads it is mainly by lowering the rivers; and I will now show the Committee (pointing to a map) a mail-coach road, where the mail-coach road runs in the middle of a lough or lake, and where there were seven or eight steep hills, we have a road reduced to a water level, and the drainage of the lough cost but 27*l.*; the road is straighter, and is really very superior to the old one, which went over the mountain rocks; the climate has been much improved, and a great quantity of land has been brought into cultivation by deepening, straightening and discharging the small lakes and rivers.

1242. Have those rivers been made navigable?—The rivers I speak of are of no great magnitude in the summer months, but by obstructions cover a great quantity of ground in winter.

1243. That ground is now saved?—It is saved, and is now of the most productive kind.

1244. Does the whole of the river run through your estate?—It does, from the source to the sea.

1245. If that were not the case, would you have been able to carry the improvements into effect?—I am sure I should have met with considerable difficulty.

1246. Would it not therefore, in your opinion, be beneficial to the country, that power should be given to the Board of Public Works, in such cases, to pass through all lands for the purpose of effecting such improvements?—I am satisfied it would be highly useful; there are many of the middling and larger rivers in Ireland, I would instance particularly the Boyne and the Suck. By the opening of our ports and the improvement of the roads, merchants are brought from Derry to attend our butter market at a very trifling expense, and the price of the produce of the soil has certainly been increased from 10 to 20 per cent., with a prospect of a further increase as facilities are afforded.

1247. After the roads were made and these improvements took place, was it not your next care to divide and subdivide the land?—It became absolutely necessary for the peace of the country, as well as for the improvement of the soil, to break up the little villages, and to disperse the population more equally over the surface; the perpetual disputes, the frequent assaults and the unceasing contentions that too great contiguity necessarily occasioned, have almost all been terminated by the dispersion of the population, and the Magistrates at Petty Sessions have given the strongest evidence throughout the barony where it has taken place, of its advantages, in their diminished business; and other proprietors who were reluctant to enter into the expense at first, have been impelled to it by the acts of their own tenants, who have witnessed the beneficial results, and the peaceable consequences which have arisen from its adoption by me, and in most cases the occupant has had the quantity of land trebled, it has been so judiciously applied.

1248. When they were in those villages, did they hold in joint tenantry?—In some instances they held in joint tenantry; that was one of the great evils; there is not a bad passion of the human breast that is not evoked by the system of joint tenantry.

1249. Was not this particular plan useful with respect to the rough lands?—I will

will only answer that the people who were most opposed to it are now most pleased with it, and I can state of my own observation, that where the tenants have had any assistance from their landlords, there has been an anxiety on their part, and they are improving their own condition and bringing into profit great districts of country. I would mention one instance; a person holding in perpetuity under me had a road run through his property by me; the lease to his tenants fell with the Duke of York's life, and there are tenants holding under him now 10 acres of mountain, paying 4*l.* 10*s.* per annum to him, who paid at the rate of 2*l.* an acre for some of the arable they held before; and since the Duke of York's death they have brought two-thirds of their new holdings into cultivation, and have paid the rent and built a house without any assistance, and are in a thriving state.

1250. In making the roads to which you have already alluded, was there any contract between you and your tenants as to the amount contributed by you and the amount contributed by them?—In almost every case the roads have been made at the particular desire of the tenants, for the conveyance of sea manure, turf, lime-quarries or mills; the roads were in many instances made by the people receiving the payment in three years; that is to say, at 3*s.* a perch, receiving 1*s.* a perch every Spring; and they were so anxious to have the roads, that in some instances they were made without the bargain; and as I could not afford to pay them all at once, they were very well satisfied with that arrangement, and gave up the roads in good repair at the end of three years; since which, when these roads call for repair, it is the custom of the inhabitants of the town-lands to come to me and complain of their defective state, and I always pay them as much more as they bring me in cash levied amongst themselves, to be expended in repairs.

1251. Are they private roads?—Many of them have been adopted and repaired by the county when they became useful.

1252. Is there not at present a large distillery in the town of Ballyshannon?—There is one that has paid upwards of 15,000*l.* duty, and has the last year increased its scale of action one-third.

1253. What markets does that distillery supply?—It finds some difficulty in supplying the internal demand alone.

1254. For whiskey?—Yes.

1255. Has that demand been increased since the making of the roads?—Yes; had the roads not been made, a puncheon of whiskey could not have been drawn, nor could the barley or fuel have been brought to the distillery.

1256. Has it supplied the place of illicit distillation?—It has to a great degree supplied its place, and by the last reduction of duty nearly meets it in the market.

1257. By the making of the road, has not the revenue been considerably increased?—It has; the mountain fastnesses have been made accessible to the revenue officers, and I hope the illicit trade is rapidly in the process of extinction; if we succeed in opening our harbours, it is impossible to say to what extent the export of spirits may stimulate and improve the agriculture of the country.

1258. Do they export much flour from Ballyshannon?—Till we were enabled by the subdivision of the country to secure the fences, it was not possible to grow any wheat. The improvement of the fences, and the giving each individual a secure and separate interest to himself has annihilated the pernicious practice of persons keeping sheep and young cattle on unenclosed districts that had no land of their own; it has raised the public voice against that predatory system in which every body before used to participate; and we are now enabled to grow as good wheat as any in the empire (for which the sea-weed is an admirable preparative) on our stiff lands. We ascertained that there was 10,000*l.* a year paid in the town of Ballyshannon to other countries for flour introduced and drawn in no less than 20 miles; in some instances 50; and we hope, by the erection of a flour mill, to supply our own market, and ultimately to export very largely the grain of our own growing. We have imported tons of wheat-seed from Limerick, and from different markets where we thought we could get it best suited to our soil and circumstances. The advantage is very great for varying the agricultural crop, and in the proportion of 25 per cent. of increased return.

1259. Within how many years have these improvements which you have mentioned taken place?—My attention was first drawn to this thing in a year of great distress, in 1817, and we have gone on gradually as our income admitted; and as the profits were more and more apparent, we have gone on gradually extending them; and since 1817, 1,000*l.* a year has been steadily applied by our agent, which has been applied in this way: for carts, 100*l.*; flax-seed, 100*l.*; dispensaries, 100*l.*;

Colonel *Conolly*, M. P.

20 May 1835.

100 *l.*; schoolmasters, 100 *l.*, with the requisites and premiums; houses, 100 *l.*; roads, 200 *l.*; sick poor, 100 *l.*; and pensions, 100 *l.*; and extras, 100 *l.*; but in the last year of 1833, and in the year 1834, I have expended 7,000 *l.*, including the building of my house, which has much benefited the country.

1260. I see among the different items 100 *l.* for flax-seed?—Yes, that has always been allowed.

1261. Do you find the growth of flax-seed tries the land in that part of the country?—It is exceedingly advantageous in varying the agricultural crop; it is a green crop, and it is the best preparation for laying down land that agriculture has ever been acquainted with.

1262. Is it not destructive to some lands?—It is an exhausting crop, but it is the best mode of laying down various soils.

1263. Is that so with respect to those lands that have been improved by lowering and confining the beds of the rivers?—When I first went into the county of Donegal, the persuasion there was that no mountain land would grow flax; and it is now the conviction of every body that no land produces flax so well as newly wrought land.

1264. Have you found benefits result from advancing the amount of the presentments after they have been sanctioned by the magistrates at road sessions?—I have tried it and found it answer so much in advancing the money in distressed years, that it, has been repeated whenever the circumstances of the country called for it.

1265. And have you found the amount which you so advanced in fact returned in the payment of the county cess, so that the road has been obtained by the tenantry without the charge being felt by the tenantry, the only expense being six weeks' discount on the amount advanced?—Yes.

1266. As to the increase of imports arising from the extension of exports, what has been the case?—In building a large house, I have found all the grates, ironmongery, plumbers' work, water-closets, force-pumps and pipes at Ballyshannon, at the Liverpool prices; and every article of consumption called for by a gentleman can be found there on the best terms, being imported in the vessels coming for agricultural produce, instead of being drawn by land carriage from Dublin.

Veneris, 22° die Maii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *John Fox Burgoyne* handed in the following Returns:—

Col. *J. B. Furgoyne.*

22 May 1835.

1. RETURN of all Payments which have been made to the Solicitor of the Board of Works for Loans from the Board, as required by order of Select Committee respecting Public Works in Ireland.

2. Description of the Parties to whom the Loans and Grants have been made.

[*See the annexed Documents.*]

1.—RETURN

1.—RETURN of all PAYMENTS which have been made to the SOLICITOR of the BOARD of WORKS for LOANS from the BOARD, as required by Order of Select Committee respecting Public Works in *Ireland*, dated 8th April 1835.

Col. *J. F. Burgoyne.*

22 May 1835.

YEARS.	NAMES of BORROWERS.	AMOUNT borrowed.	NATURE of SECURITY.	COSTS of LOAN.
		£. s. d.		£. s. d.
1832:				
August 3	Richard Johnston	1,000 – –	Mortgage and Bond Collateral	27 – –
„ 13	Ardglass Harbour Commissioners	6,650 – –	Mortgage of the Tolls, &c.	70 – –
	James O'Gorman	200 – –	Mortgage and Bond	14 10 –
„ 17	The Limerick Navigation Company	8,910 – –	Mortgages of Tolls and other Property	56 – 10
Sept. 22	The Ballymurtagh Mine Company	1,000 – –	Mortgage and Bond	58 18 –
Dec. 7	John Salmon	500 – –	Mortgage and Bond	27 – –
1833:				
Jan. 14	The Athlunkard Bridge Commissioners	9,889 19 2	Mortgage of Tolls, &c.	72 13 10½
Feb. 2	The Limerick Bridge Commissioners	25,000 – –	Mortgage of Tolls, &c.	136 17 4
Mar. 23	The Knight of Kerry	7,000 – –	Mortgage under a Power given by a Marriage Settlement	166 12 –
June 13	Galway Harbour Commissioners	17,000 – –	Mortgage of Tolls, Ground, &c.	84 7 –
„ 20	The Blessington Turnpike Trustees	3,500 – –	Mortgage of Tolls, &c.	67 6 2
July 18	Dublin and Kingstown Railway Company	50,000 – –	Mortgage of Profits, Ground, &c.	105 2 8
August 1	The Drogheda Harbour Commissioners	10,000 – –	Mortgage of Tolls, &c.	51 2 8
Sept. 10	Newry Navigation Company	12,000 – –	ditto	62 3 11
1834:				
Jan. 23	The Trustees of Lords Besborough and Duncannon	2,000 – –	Mortgage and Bond	123 12 11
„ 31	Bruree Chapel	150 – –	Bond	4 – –
June 2	Second Loan to Dublin and Kingstown Railway Company	25,000 – –	Mortgage of the Tolls of the Undertaking, security for payment of calls towards liquidation of Loan	88 16 8
1835:	The Mullingar Turnpike Trustees	3,000 – –	Mortgage	26 18 4
April 9	The Commissioners of Wide Streets	20,000 – –	Mortgage of the Rates, &c.	35 1 1
	Boyne Navigation	1,700 – –	Mortgage of Rates, &c.	13 11 –
			£.	1,291 14 5½

21 May 1835.

Alex. Stewart.

2.—STATEMENT of LOANS and GRANTS recommended and sanctioned, classed under the different Descriptions of Parties to whom made.

	£. s. d.
LOANS:	
To Grand Juries	84,420 18 10
To Turnpike Trusts	8,100 – –
To local Improvements under Act of Parliament and otherwise, not contemplating Profits	103,449 19 2
To Companies by Act of Parliament, looking to profits from Tolls	112,000 – –
To Individuals for Mines, Quarries, Drainage of Lands, &c.	14,200 – –
To Ecclesiastical Commissioners, under 4 & 5 Wm. IV. c. 90.	100,000 – –
£.	422,170 18 –
GRANTS:	
To Grand Juries	31,954 10 10
To Individuals for local improvements	918 18 –
To a Company for - - ditto	635 15 4
£.	33,509 4 2

Office of Public Works, Dublin, 19 May 1835.

(signed) *Henry R. Paine*, Sec.

Dixon Holmes, Esquire, called in; and Examined.

Dixon Holmes, Esq. 22 May 1835.

1267. HAVE you directed your attention to the capabilities and improvements that might be made in Ireland, and the utility of public works there?—I have for the last ten years.

1268. Have you been to Ireland with that view?—Yes, a great many times.

1269. What parts of Ireland have you principally visited?—Principally the south and south-west: principally the county of Tipperary, and a good deal in the western extremity of the county of Cork.

1270. Did you discover any want of roads, and communication from one part of the country to the other?—Very great, and I was astonished to find from Rosscarberry down to the sea, a distance of about 30 miles, that there were no cross-roads for the occupation of the land.

1271. Were there lines of communication, though not cross-roads?—There is a very fine road that goes from Cork to Bantry Bay; there are no cross-roads; and there is a square of 30 miles, I might say, without any cross-roads, and I saw the farmers carrying their manure on to the land either on the backs of horses or on their own backs, and bringing the produce off in the same way.

1272. Then are you not of opinion that it is absolutely necessary that roads should be made in that country?—Yes; I am of opinion that agriculture cannot be flourishing without the means of getting to the land in a better way than now.

1273. How do you propose that the roads should be made?—I submitted to the gentlemen of that district at the time to place every acre of land within one mile of good passable road; there should be a landlord's tax of 6*d.* per acre, which would make all the necessary roads, and pay the debt and interest in ten years.

1274. Did you contemplate any assistance from Government for that purpose?—I did not for this measure; I think if they would submit to a tax of 6*d.* per acre upon the land, and paying the contractors by transferable road bonds, bearing interest at 4 per cent. in ten years, they would discharge the whole tax. If you divide the counties into sections, four miles by two, there would be 5,120 acres of land within the area of each section, and one side and one end of each section would place the 5,120 acres within a mile of road; that is, 853 acres of land to every mile of road forward; therefore a tax of 6*d.* per acre would be 21*l.* 6*s.* 6*d.* per year.

1275. In that part of the country you said that broad lines of communication were sufficient?—They are sufficient, and in a very high condition.

1276. Did you find in any other parts of the country there was a deficiency of these broad lines of communication?—Not from my own knowledge, but I understood that there was a great deficiency in the county of Galway. In these parts the broad lines of communication were sufficient, but the cross-roads for the occupation of the soil was not, and consequently they did not use cars.

1277. What is the nature of the soil in those parts of the country?—It is rather various; there is a great deal of rock, but the land between the rock is very fine.

1278. Have you at all visited any of the bogs or waste lands of Ireland?—I have, several of them.

1279. Do you agree in opinion with the Commissioners' Report, that they are capable of improvement?—No doubt of it.

1280. Have you any plan to state to the Committee for the improvement of the bogs and the waste lands in Ireland?—I think that it ought to be done on a large scale or not at all, and I am afraid that such a measure as that cannot be effected without the assistance of Government. According to the Third Report of the Committee on Emigration, who made their Report in 1827, there were 4,900,000 acres uncultivated declared to be capable of improvement in the various counties, and they gave in their Report the amount of the different quantities of land in each county, which is as follows:—

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SUMMARY of the WASTE LANDS of IRELAND.

COUNTIES.	Cultivated.	Uncultivated, capable of Improvement.	Unprofitable.	TOTAL.
	Acres.	*Acres.*	*Acres.*	*Acres.*
Antrim - - -	336,400	218,870	119,136	674,406
Armagh - - -	166,000	92,430	51,233	309,663
Carlow - - -	173,000	34,000	15,021	222,021
Cavan - - -	265,400	160,500	61,720	487,620
Clare - - -	579,000	104,400	88,044	771,444
Cork - - -	1,118,000	361,000	150,056	1,699,056
Donegal - - -	507,000	417,920	175,951	1,100,871
Down - - -	349,000	126,170	89,481	564,651
Dublin - - -	159,130	49,920	21,071	230,121
E. Meath - - -	465,000	40,120	26,078	531,198
Fermanagh - -	254,000	120,500	84,689	459,189
Galway - - -	829,200	532,040	242,479	1,603,719
Kerry - - -	556,300	348,410	144,483	1,049,193
Kildare - - -	259,990	87,670	35,875	383,535
Kilkenny - - -	403,100	58,110	25,367	486,567
King's County - -	341,310	80,900	34,954	457,164
Leitrim - - -	222,250	128,200	64,189	414,639
Limerick - - -	460,000	114,110	52,425	626,535
Londonderry - -	279,400	172,070	80,214	531,684
Longford - - -	121,900	41,460	53,963	217,323
Louth - - -	157,000	12,000	10,415	179,415
Mayo - - -	502,900	565,570	212,302	1,280,772
Monaghan - -	257,000	12,000	21,952	290,952
Queen's County -	311,100	47,120	22,966	381,186
Roscommon - -	348,100	122,460	91,113	561,573
Sligo - -	143,500	189,930	66,953	400,383
Tipperary - -	693,200	112,490	92,329	899,019
Tyrone - - -	539,900	135,020	91,988	766,908
Waterford - -	348,500	44,220	33,016	425,736
West Meath - -	287,330	51,200	36,581	375,111
Wexford - - -	340,470	156,200	58,828	565,498
Wicklow - - -	281,000	162,000	61,792	504,792
	12,125,280	4,900,000	2,416,664	19,441,944

This, which is described as unprofitable, includes the ground on which all the towns stand, the rivers and lakes, and so on, that is included in the number of acres of unprofitable land.

1281. What is your plan for the improvement of these lands upon the broad scale you alluded to?—It is a proposal to raise a loan for colonizing and cultivating the waste lands of Ireland.

According to the Report of the Emigration Committee in 1827, there are 4,900,000 statute acres of waste land capable of improvement.

The quantity of land in cultivation is 12,000,000 of acres.

The population is 8,000,000, that is one and a half acre to each person.

The export of agricultural produce from Ireland exceeds 8,000,000 *l.* Sterling per annum; this must limit the amount of produce for home consumption below what is necessary for the fair subsistence of the population.

By an Act of Parliament of the 49th Geo. III. c. 102, Commissioners were appointed to inquire into and examine the nature and extent of the several bogs in Ireland, and the practicability of draining and cultivating them.

By four separate Reports of the Commissioners so appointed, it appears that there are 1,576,000 acres of flat bogs, and 1,254,000 acres of bogs that form the covering of mountains, being a total of 2,830,000 acres of bogs capable of improvement; and according to the quantity of waste stated by the Emigration Committee, there are 2,070,000 acres of mountain, &c.

The population of Ireland has increased since the Bog Commission was appointed in 1809 at least 33 per cent.

And no efforts have been made either by Government or the proprietors to derive any advantage from the possession of such immense tracts of rich but uncultivated soil.

England now pays to Holland, Belgium and Holstein 700,000 *l.* per annum for the single article of butter, the whole of which might and ought to be produced in Ireland.

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The middling and even small farmers in Ireland have a great deal of ready money, which they hoard up for the want of the means of employing it. In proof of this the increase of deposits in the Savings Bank in Ireland since 1831 has exceeded 25 per cent., while in England and Wales it is not more than eight per cent.

Those persons would take more land, if they could obtain it, on which to employ their capital.

Ireland is in a singular situation; her nobility and gentry have no ready money to aid in the colonization of the unreclaimed lands, and which are fettered by entails and settlements.

The farmers who have money cannot employ it, because the landlords cannot give them a sufficient interest in the soil, and consequently the mere labourer finds no employment; hence the extensive misery which pervades that country.

The principal cause of all the disturbances in Ireland is the difficulty of obtaining land whereon to employ their energies and support their families.

Thus here is rich land without occupation, a large diffused capital without employment, and a starving population in misery for want of combining the best elements of a nation's wealth and prosperity by productive labour.

It would promote the public tranquillity by a profitable employment of the population, and thereby securing the comforts of the labourers, and increasing consumption in the same ratio as it increases its production.

It would increase the demand for manufactures in proportion to the enlarged comforts of the people.

Though there is, as before stated, a great deal of ready money in Ireland amongst the occupiers of land, it is in small sums, and cannot be used in large operations.

It is therefore proposed to obtain a loan of 5,000,000 on the Government giving security for 2 per cent. interest.

To be vested in six Commissioners, who shall be authorized to take leases for 99 years, of such proprietors of waste lands as may be willing to let the same at a fixed rent.

Tenants for life to be authorized to grant such leases on the rents being secured to the purposes of their several trusts.

The Commissioners to expend a certain sum per acre in making roads and drains, and erecting the necessary buildings, and dividing the lands into farms of various quantities, according to the wants and means of the persons requiring occupation of the same.

The Government to be exonerated when the land pays 2 per cent.

After paying the expenses of management, all profits to be for the benefit of the Loan Contractors.

Two Commissioners to be appointed by Government.

Two by the Loan Contractors, and

Two by the landowners letting their lands to the Commissioners.

In a country situated like Ireland, it appears to be impossible to effect any great measure but under the immediate protection of the Government.

Even if the Government had the whole interest to pay, (which is impossible) it would only be 100,000*l.* per annum, and which would introduce into that country an additional floating capital of 5,000,000*l* sterling, and probably bring into activity another 1,000,000*l.*, now hoarded and useless for want of the means of employing it.

The probable increase of revenue would not be less than 500,000*l.* per annum, by the duties on all consumable articles.

By the increased demand for labour and the increased floating capital introduced, it would increase wages to a rate more equal with England, and therefore prevent the periodical inundation of the Irish peasantry to this country, to the great injury of the British labourer, and the increase of the poor rates.

Presuming an expenditure of 5*l.* an acre, the proposed loan would bring 1,000,000 of acres into cultivation, which would give a produce of 4*l.* an acre; that is, an increase of the national wealth of 4,000,000*l.* per annum.

The owners of the land to be allowed to redeem their leases at 16 years' purchase on the profit rents; and on paying half the purchase money, the Commissioners to be authorized to take mortgages for the remainder.

The Commissioners to be authorized to take more land with the proceeds of the sales till all Ireland was brought into complete cultivation.

1282. You say that the middling and even the small farmers in Ireland have a great deal of ready money, which they hoard up for want of the means of employing it,

it; what is your authority for that statement?—It is rather in the county of Tipperary, and part of the county of Cork; in talking with the great millers there, several of them stated to me that they were in possession of many thousands of pounds in sums of from 20 *l.* to 300 *l.* or 400 *l.*, which they were obliged to lock up, because the persons did not lend it to them, but only brought it to them for safe custody; and one miller said to me, "I have 5,000 *l.* locked up, and I dare not use a shilling, because I must give it back precisely in the form I received it." And as another proof, I would mention, about five years ago, I did propose to a large proprietor in the county of Tipperary to take of him a large quantity of waste land, if he could give me a sufficient lease, believing that I could find in London some capitalist who would join me in the undertaking. He stated the terms, which were extremely liberal, on which he would do it. I immediately went to the parish priest, and told him the object I had in view, and asked him his opinion of it. He said, "You are a Protestant;" but I told him "I have nothing to do with religion; I am only talking of the plough, and if you will produce me responsible tenants, I have no other question to ask, and we will divide the land; we propose to spend a sum of money on it in erecting buildings and making roads, and receiving a fair compensation for the use of the money." I left in two days, and gave him my address, and in six weeks he sent me over a list of names of persons that were willing to take the land, and who had so much money; but they proposed to put the money into the hands of the provincial bank at Clonmel, in their own name and mine; and the money to be drawn out for the purpose of being employed on the land as it was wanted, and that sum amounted to 9,700 *l.*, in sums as low as 20 *l.*, and some as high as 500 *l.* or 600 *l.*

1283. Have you any reason to suppose that is the case in other parts of Ireland?—I am sure of it, for there were people who came 60 miles to make their offers for the land in question. I soon found a gentleman in the city of London to furnish all the money necessary; but when we went to the proprietor, he could not give us a lease for longer than 31 years, and three lives concurrent; and that first induced me to think of a measure to get Parliamentary aid, and to throw the lands open.

1284. What lease did he require?—He would not take less than 60 years, although 31 years and three lives is very little different. It is not an English custom; and English people will say, "Let me know what I am to have."

1285. What rent were you to pay to the proprietor?—He proposed to give it me the first seven years rent-free, and afterwards five shillings per Irish acre during the remainder of the continuance of the lease.

1286. Is that land unprofitable to this moment?—Yes, to this hour.

1287. Had the person, who was to make the lease, a power under a will or a marriage settlement?—The estate was in settlement, and he was bound not to grant a lease for more than 31 years or three lives.

1288. Are you aware in many parts of England, particularly in Lancashire, that they are as conversant with leases for three lives as they are in Ireland?—I know they are in Lancashire; but I know that nobody here will take a building lease on six lives, but they take it on 99 years.

1289. What was the arrangement made by those persons who reclaimed Chatmoss in Lancashire?—I do not know.

1290. Do you know of large quantities of bog being profitably reclaimed by persons of skill and capital in Ireland?—I do not.

1291. Can you suppose that people without skill and capital can profitably reclaim bog, when men with skill and capital have not found it their interest to do so?—That is the very reason why I propose it to be done on a large scale, not leaving it to little contractors to do it.

1292. Do you know any experiment on a moderately large scale of the application of skill and capital which completely failed?—I do not; I know of several small concerns that have succeeded in an eminent degree.

1293. What do you call small?—Five hundred or 600 acres.

1294. Have you known 500 or 600 acres profitably reclaimed?—I have.

1295. Have you ever been in Kerry?—I have not.

1296. Your observations you confine to Tipperary and Cork?—Yes.

1297. Is the district you applied yourself to mere bog or mountains?—Both; there is a great deal of mountain in Tipperary; there are the Tipperary mountains that go from Cahir to Tipperary, a distance of about 12 English miles; there is the

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glen of Aharlow, the property of Mr. Dawson, in cultivation, and it is evident that all the other glens might be so cultivated.

1298. Did you ever see the line of cultivation of the Galties from Cahir to Mitchelstown?—I have.

1299. Do you approve of the mode in which it is done?—There is a great deal of good done there.

1300. Had you seen it before?—I had not seen it; it is near this road. I made a proposal to take 5,000 acres.

1301. To whom did you make the proposal?—To the proprietor.

1302. You say, to your knowledge, that several tracts of land to the extent of 500 or 600 acres have been reclaimed with beneficial results?—Yes.

1303. And profitable results?—Yes.

1304. Have you had occasion to observe the great improvement upon the mountains towards Mitchelstown?—I have.

1305. Were they made by the tenant or by the landlord?—I rather think the tenant.

1306. Do you not know the Keeper mountains?—Yes, I do.

1307. Do you not think a great part of that is capable of cultivation?—I do; I think many mistakes have been made in cultivating bogs in draining it too much.

1308. Do you mean in under-draining it too much?—Yes, in sinking it too deep; I propose surface-draining; by merely ploughing ridge and furrow, you will get the land sufficiently drained for a good crop resting on water all the time, if there is a sufficient fall from the land to the main drains.

1309. Have you directed your attention to the making railways in Ireland?—Yes; that was the first business that took me to Ireland.

1310. Where did you propose to make a railway?—There was an Act of Parliament passed to make one from Waterford to Limerick.

1311. Has that been carried into effect?—It has not.

1312. Is it for want of means?—It is.

1313. In your opinion, would it be a beneficial undertaking?—I should think it would.

1314. How do you account for not carrying it into effect?—The want of confidence in the public to subscribe to the undertaking.

1315. What produces that want of confidence?—I cannot tell. I ought to state, particularly as the Chairman of the Board of Works is here, that it was not their fault it was not executed, because that Board, upon an investigation of all the circumstances, offered to lend 100,000*l.*, if there was a *boná fide* subscription for another 100,000*l.*

1316. What would have been the result of the railway if it had been carried into effect?—The railway for which the Act of Parliament was obtained was to go from Waterford to Limerick, but it was afterwards suggested, that if it went to the deep water below Carrick on Suir, it would be very sufficient; and it was also proposed, not merely to go to Limerick, but to go above the falls of the Shannon at Killaloe, which would open the course of the whole of the Upper Shannon from Lough Allen to Lough Derg, a distance of 147 miles.

1317. And thereby open the Shannon to the London market?—Yes, and open the Shannon to the London market by way of Bristol.

1318. How would this project of a railway to Killaloe operate upon the trade at Limerick?—I think the trade of the Upper Shannon does not go to Limerick, but goes down the Grand Canal to Dublin, because no person would export agricultural produce from Limerick when they can get it from Waterford, it is a distance of 300 miles longer voyage.

1319. Was the line ever surveyed to Killaloe?—No, it was surveyed to Limerick, and it would not be above 15 or 20 miles more to survey.

1320. Are there not some great and almost insurmountable natural obstacles?—No, if you keep to the south of the Keeper mountains, and go up the side of the Shannon, which will lengthen the railway a little, but not very materially.

1321. Do you know of your own knowledge that there is a sufficient level in that line?—I do; from the town of Tipperary to Limerick there is a fall of 267 feet, and the rise of the Shannon between Limerick and Killaloe is 97 feet; therefore it diminishes that fall, and you have at first to keep on higher ground to the amount of nearly 100 feet.

1322. Can you state what the estimated expense of the railway from Waterford to Limerick is?—I have the estimate made by Mr. Stephenson the engineer, who went

went over the whole line with me; we then contemplated going no further with it than Tipperary, because the merchants of Limerick did not think it would be very useful to them, and there were 38 miles from Tipperary to Carrick, according to Mr. Stephenson's estimate, would cost 148,616*l.*; the distance from Tipperary to Limerick is, I believe, 22 miles, with a fall of 267 feet in it, according to Mr. Nimmo's survey.

1323. Is there any estimate of what the expense would be from Tipperary to Limerick?—No separate estimate; it is estimated in some of the papers; the whole estimate was 324,000*l.*; it is stated as a conjunctive estimate. It would cost 350,000*l.* to take it to Killaloe. I was going to observe, that I had a large meeting in the town of Tipperary of the pig-jobbers there, to inquire what they could afford to give me to carry their pigs from thence to Clonmel to the bacon yards; they offered 1½*d.* a mile for every pig, great and small. I told them, when they made that offer, that the largest pig that ever was fed in Ireland I would carry for 1*d.* a mile, and the small store pigs for ½*d.* They told me it cost them 2½*d.* for every fat pig, when they took into consideration the time they were on the journey, and the loss of flesh and the death of the animals by fatigue; and Mr. Murphy, a large bacon merchant at Clonmel told me, that when the pigs arrived at his yard he never would kill them till they had undergone eight days quarantine, to see whether inflammation was produced by their journey, "but if you will bring them by the railway I will kill them the next morning."

1324. Do you think that it would promote the reclaiming of waste lands, if proprietors, circumstanced as the gentleman with whom you were anxious to deal, were empowered to charge the inheritance with a certain portion of the expense incurred in the reclamation of those waste lands?—I should think there is no doubt it would, particularly if you allow the tenant who takes a long lease to charge a portion of his expenditure upon the freehold, which I believe in Scotland they do. It is very singular, that in the Bog Report they seem to have entirely overlooked, that the statute of 5 Geo. II., an Irish statute, has given power to drain bogs and waste lands, and apportion the expense on the respective proprietors, by a Commission issuing out of the Court of Chancery and a Jury to decide thereon, and with power also to settle the metes or boundaries of the bog of each proprietor, and where no ancient boundary can be ascertained, then to assign to each proprietor a quantity proportioned to his cultivated land; that is the Irish statute of the 5 Geo. II., and by 11 & 12 Geo. III. there is a power for the tenant for life to grant leases of bog or waste lands for 61 years.

1325. Did not the proprietor take advantage of that statute?—He did not know of that statute till three months ago, and he could not have let the quantity, because there is an absurd clause in that Act of Parliament, that he shall not grant more than 50 acres to any one tenant.

1326. Are you apprised that the first statute has been found impracticable, on account of the expense, it requiring the expense of an equity suit to carry it into effect?—It is a very common practice in this country under the Sewer Laws of Henry VIII.

1327. The Commissioners of Sewers here have a jurisdiction which is not the Chancery jurisdiction; I want to know whether you are apprised that that statute has been found unavailing, for this reason, that no improvement could be made under it without all the expense, in fact, of a Chancery decree?—I was not aware of that; I am glad I have mentioned it, because I have got that explanation.

1328. If you had five millions to lay out, do you think that the bogs and waste lands are those lands upon which that sum could be most profitably expended?—I do.

1329. Do you consider that the arable and pasture lands of Ireland are so maintained and improved, that a very considerable expenditure might not be profitably laid out upon them?—No doubt it might, but it is impossible to raise a large sum to be laid out in detail by the local tenantry, because you cannot lend the money to the different occupiers; and therefore, unless those to whom the money belongs have a control over the land for a given time, they will not advance the money.

1330. Supposing five millions, or any sum you please, what I wish to know is, whether that sum would not be made more productive of interest to the person, by laying it out upon lands already broken in, than by laying it out upon lands uncultivated?—I do not think it would.

1331. Do you know any district in Ireland in which even the best land in it is cultivated to that degree, that it is not capable of great improvement, and great advantage would be derived by laying out more capital upon it?—I am quite convinced

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vinced that that is the case, that more capital might be laid out both there and in England; and England wants capital laid out upon land to the full as much as Ireland, I believe.

1332. Do you mean to say there is the same room for the expenditure of capital upon English lands as they stand at present, as upon lands in Ireland?—I do.

1333. Do you know any farm of 20 acres in Ireland, cultivated to that degree that capital might not be very advantageously laid out?—I do not, nor do I know 20 acres in England that have not the same susceptibility.

1334. Can you expect that capitalists in London will lay out five millions in Ireland, if, as you now say, they can advantageously lay out five millions for the cultivation and improvement of land in England?—Yes, for the best reason in the world, that they cannot get land here; there you might give them 50,000 acres in one mass upon which to advance the money; here you would find the quantity of acres in the hands of a thousand persons.

1335. Have you been in Ireland since the Trappists have got a tract of land from Sir Richard Musgrave?—I have not since they completed their works, but the success of their undertaking on the barren mountains of the county of Waterford, completely illustrates my proposal for cultivating the wastes of Ireland.

1336. Are you acquainted with the sort of land called Bottoms, land on the borders of rivers and filled with springs?—Yes.

1337. Do you not consider capital laid out in draining those lands and getting the command of water that comes upon those lands, would be more beneficially laid out than in reclaiming bogs or mountains?—It is very likely; but in most of the mountains I have seen in Ireland there are reservoirs of water as high up as you would desire, and of consequence you might irrigate them to any extent.

James Pim, junior, Esquire, called in; and Examined.

James Pim, jun. Esq.

1338. DO you live in Dublin?—I do.

1339. What is your profession?—I am a stock-broker; I am also treasurer to the Dublin and Kingstown railway.

1340. As stock-broker, have you had an opportunity of seeing the manner in which the issue of Exchequer bills, under the Public Works Act in Ireland, has operated?—Yes.

1341. Has it operated beneficially to the community?—The issue of Exchequer bills that has lately taken place has been of great convenience to the monied interest.

1342. Was there any issue of Exchequer bills in Ireland before that?—None properly so called, but a good many years ago we had the Irish Treasury bills, which were very nearly of the same character.

1343. When did they cease to be issued?—Upwards of 20 years ago, I should think.

1344. Then, from that period to 1831 you had neither Treasury bills nor Exchequer bills in Ireland?—We had not.

1345. And was the want of such securities felt?—Yes.

1346. What is the peculiar advantage of laying out money in Exchequer bills?—It enables parties to deposit money for short periods at a low rate of interest, without being liable to the considerable fluctuation which sometimes takes place in Government securities; for instance, trustees and other persons have often large sums of money to pay for the purchase of an estate, and not knowing when the title-deeds will be quite completed, the money can be safely invested in Exchequer bills; they might incur considerable responsibility if they invested the money in Government securities.

1347. Could they not buy Exchequer bills in London?—Considerable difficulty would attend that; in the first place, the risk of transmission; in the second place, the interest upon those Exchequer bills is only payable at the Bank of England.

1348. Is the interest of the Exchequer bills issued in Ireland payable in Ireland?—Yes; payable at the Bank of Ireland.

1349. At what rate were the Exchequer bills issued under the Public Works Act?—The first issue was at 2½*d.* per day.

1350. What premium did those Exchequer bills bear?—The premium varied; the first issue sold at a low rate; we were not then used to them.

1351. Did the premium afterwards rise?—Yes; as the amount issued by the Board increased, the premium advanced.

1352. How do you account for that?—Unless there was a considerable amount of

of them in circulation, we should not have what is technically called "a market" for them; that is, a person wishing to invest money cannot find Exchequer bills to purchase, and, on the contrary, a person wishing to sell Exchequer bills cannot find persons to buy.

1353. The parties are not sure of always finding them?—No.

1354-5. Capital is not turned in that channel?—Precisely so; I can illustrate it by another instance; we have a considerable amount of floating debt of debentures of the Grand Canal Company, upwards of 700,000*l.*, and a small portion of that debt, about 17,000*l.*, bears interest at the rate of 3½ per cent.; and those debentures always sell at a much less proportionate price than the great mass of the debt which bears interest at the rate of 4 per cent., from the difficulty of finding purchasers or sellers; in point of fact, from their so seldom coming into the market.

1356. You said the first issue of Exchequer bills was at 2½*d.* per day?—Yes.

1357. Are there not any of those bills at a lower rate?—Yes.

1358. At what rate?—Twopence, which is 3*l.* 0*s.* 10*d.* per cent.

1359. What is the premium now obtainable?—About 7*s.*

1360. How do you account for the premium being so much higher in London on Exchequer bills issued than it is in Ireland?—The London "Exchequer bill market," to use a technical phrase, is a very much better one than the Dublin, for they can at once invest almost any amount of money, however large, in Exchequer bills; and, on the other hand, you can easily convert a large sum of Exchequer bills into money.

1361. Would not the premium be raised in Ireland if the issue of Exchequer bills was greater?—I am satisfied, if the issue of Exchequer bills was gradually increased so as to meet the demand, that the premium on them would gradually rise; and I see no reason why Exchequer bills should not bear as high a price in Dublin as in London, when the 3 per cent. Consols and the other description of Government securities bear the same proportionate price.

1362. You mean if the market was properly supplied?—Yes, if it was fairly supplied.

1363. What was the premium obtainable when the interest was 2½*d.* a day upon Exchequer bills?—It varied from 12*s.* to 45*s.*

1364. Then the premium fell upon the lowering of the interest?—Certainly.

1365. Would you not expect the premium to rise, notwithstanding the lowering of the interest?—As I said before, I think if the amount of the issue of these securities were gradually increased, the premium would rise considerably beyond what it is at present.

1366. Is the interest of those Exchequer bills payable in London or Dublin?—The interest of the Exchequer bills issued by the Board of Works in Ireland is payable at the Bank of Ireland.

1367. The interest of Exchequer bills generally is payable at the Bank of England?—Yes.

1368. Would it not be a great convenience if they were payable both in Dublin and in London?—Certainly; the advantage would be, that we should have always a market in England to apply to, as we now have in other Government securities; for instance, if we get an order from the Court of Chancery or others to sell a large sum of stock which could not be effected in our market without reducing the price, we have the power of transferring that stock at once to London, and having it sold there; and *vice versâ*, if the interest on Exchequer bills were made mutually payable at the Banks of England and Ireland, the same result would obtain to a very considerable extent, the only difference I can see being the postage and risk of transmission.

1369. And you think the premium would be raised?—Yes; that would be an inevitable consequence.

1370. At present do the parties purchase Exchequer bills in Ireland and sell them in London at a higher premium?—No, they will not purchase in the London market our Exchequer bills at any price, if payable only at the Bank of Ireland.

1371. If this alteration was made, would there be any difficulty in reducing the interest to 1½*d.* a day?—No, I think not.

1372. How much per cent. is 1½*d.* a day?—£. 2. 5*s.* 7*d.*

1373. If you were compelled to negotiate Exchequer bills paying 1½*d.* a day at present, would they be at a discount in Ireland?—I am quite satisfied of it.

1374. And it would not be so if they were mutually payable at the Banks of

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England and Ireland?—No; I consider the premium in Ireland would nearly approximate to the premium here.

1375. Would not the advantage you first stated arising to Ireland from the opportunity of laying out money in Exchequer bills be sometimes taken away?—No, quite the reverse.

1376. Would not England purchase the bills in Ireland?—We should have the corresponding advantage of purchasing English Exchequer bills.

1377. At a high premium?—I consider the premium would be the same in both countries as nearly as possible.

1378. Do you not think money payable in London is more valuable in Dublin than money payable in Dublin is in London?—No; it has not been so for the last three months.

1379. Do you infer from that course of exchange that the amount of imports into Ireland are as great as the amount of exports from Ireland to this country, and that the payments are nearly equal on both sides?—That is not the deduction I should draw from it.

1380. In your opinion, independent of any benefit arising to Ireland by an additional sum of 500,000*l.* being laid out in public works, would not great benefit arise to the money market in Ireland from the issue of Exchequer bills?—We have not at present 500,000*l.*, or near it, in circulation.

1381. Supposing you had 500,000*l.* in addition to what you have at present?—I am satisfied from my experience of the money market at Dublin, that if they were issued judiciously and by degrees, in the course of twelve months 500,000*l.* additional of Exchequer bills would be taken into circulation with great advantage to the Irish capitalists.

1382. And at a premium?—Decidedly, supposing the present state of things to continue, and the present price of the funds; and if they were also made payable at the Bank of England they might be issued at a lower rate of interest than at present, and the premium would be higher than at present.

1383. Payable both in England and in Ireland?—Yes, reciprocally, at both.

1384. Would there be any risk of the English market absorbing the whole issue?—I think not; I can see no good reason to apprehend such a risk when the price of other Government securities is as high in Dublin as in London.

1385. Are the 3½ per Cents. about the same?—They are rather higher at present in Dublin.

1386. Do they not rather follow the English market, and the price is rather lower?—Inasmuch as the amount of the exports has considerably exceeded the amount of imports; the balance is then to be made up in a great degree by the importation of Government securities.

1387. Is not the price of Government securities rather more steady in Ireland, and less liable to fluctuation from day to day, from political events or rumours?—They are less liable to occasional fluctuation throughout the day; but on our Stock Exchange we are always influenced by the prices at the close of the day here.

1388. There is less daily gambling?—There is, in point of fact, no gambling on the Dublin Stock Exchange; we have no time bargains; all business transacted by us is *bonâ fide* and immediate.

1389. You stated that there was a constant flow of stock from England to Ireland for the purpose of making up in part the difference between the exports and imports?—That is the tendency.

1390. Generally, that is so?—There is a very considerable annual increase in the amount of Government stock transferable to the Bank of Ireland; the annual Parliamentary Returns show a considerable quantity is, upon the average, imported into Ireland yearly; some years, from particular causes, it has been rather the reverse.

1391. Are there not two drains upon Ireland; is not all the taxation of Ireland a drain, being remitted to England; and is there not another drain, absentee rents?—Yes.

1392. Do not those two drains, to a certain extent, absorb the value of our exports?—Yes.

1393. And therefore all the surplus that can come in the shape of Government stock is the surplus of exports over absentee rents and fiscal demands, and the imports?—Yes, in part; but we have also to pay for all our other imports.

1394. Do you not conceive that there is an influx of capital into Ireland, and that Ireland exports more than meets the imports, its drains and its fiscal charges;

do you consider that there is a considerable annual surplus after all that is supplied?—A very large one; it is the annual increase of capital to persons engaged in agriculture and trade.

1395. Do you conceive that the amount of the transfer of Government stock to Ireland remunerates Ireland for the excess of her exports over her imports?—I do not; I think it only does so partially.

1396. Have you any idea to what extent?—No.

1397. How do you suppose the difference between the amount of the exports and the imports is made up?—Principally by the importation of Government securities.

1398. You state that the exports are converted into money; how is that money applied?—In the payment of fiscal charges, the payment of rents to absentees, the payment to importers for goods; and I think the balance is in a great degree made up by importing either bullion or Government securities.

1399. At the end of each year the transactions on each side are closed?—Yes, to a very great degree; there are balances which may remain in the hands of bankers or agents.

1400. Upon that settlement the amount of the exports that go to countervail the Irish revenue payable in London and the Irish absentee rents, have no return to Ireland to the extent of the revenue payable by Ireland to England, and the absentee rents payable by Ireland to England; the exports of Ireland have no return to Ireland?—I think not.

1401. Suppose the exports of Ireland to be twenty millions, is not Ireland entitled to the credit of that twenty millions, in that view of it, as due to her by England?—I conceive so.

1402. Now, taking the surplus of the revenue of Ireland over the expenses of the establishment there to be four millions, that four millions does not come back to Ireland, but remains in England to be paid by the exports; is not that so?—I conceive so.

1403. Suppose the absentee rents to be six millions, payable in England, that six millions also remains in England, without giving back anything to Ireland, which are exports *pro tanto*; is not that your opinion?—Yes.

1404. That being upon that supposition 10 millions, the other 10 millions you will account for in general terms by the six millions imports from England to Ireland, for which Ireland gets value in imports?—Yes, imports of produce or merchandize.

1405. That is the actual value Ireland would get for her exports?—Entirely.

1406. Then what would remain is four millions more, and, according to your statement, Ireland gets value for that in bullion or Government securities?—Precisely.

1407. And the clear result of that would be, that on the 20 millions of Irish exports, Ireland gets back in equal value, in imports of one kind or other, 10 millions, and the other 10 millions would be expended in England altogether?—Yes, provided the arbitrary sums you have supposed are correct.

1408. Are you at all aware of the extent to which the revenue of Ireland surpasses the Irish establishment?—I am not aware of it.

1409. Did you not state just now that there was evidence of accumulation of capital in Ireland?—I did.

1410. How can you make that consistent with the answer which you have just now given to the question put to you?—I think it is perfectly consistent; for instance, the four millions which were supposed by the Honourable Member would form a gradually increasing fund; it would be four millions added to our former savings; we should have four millions next year, with the interest upon that four millions.

1411. Then, according to your view, 10 millions annually was lost to Ireland, in consequence of the transmission of revenue and absentee rents; therefore, instead of having an accumulation of four millions a year, you would have a deficiency of six millions?—I do not agree with you; in one case we might have an increase of 14 millions, and in the other we should have only four millions.

1412. Therefore, you say that Ireland loses the difference every year; she would otherwise gain it, if she was not in the position to England that she is as to absentee rents and taxes?—I do not conceive that I am enabled to give evidence upon an abstract question of political economy of this kind.

1413. Supposing for a series of years there was a balance against Ireland in this way,

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way, must it not inevitably lead to a bankruptcy?—No, because the balance has been in favour of Ireland, but a balance not so large as it might have been under other circumstances.

1414. Then the result of your evidence is, that there is not any loss or drain upon Ireland, but a less comparative gain?—Precisely so.

1415. Do you know any agricultural country in the world in which there are so many poor people belonging to it?—No.

1416. You have stated that Ireland does not lose by her intercourse with England, but she does not gain what she might gain; that is, her profit is not so great as it might otherwise be, if there was not the drain of absentee rents, and the taxes of Ireland, paid here beyond the expenses of her own establishment; I wish to ask you, do you think it possible that England and Ireland could, under any circumstances, carry on trade together, by which Ireland could gain the full amount of the sum which you now say she does not gain; is that possible?—I do not think it is possible.

1417. Then if it is not possible, it is not fair to say that she does not gain as much as she otherwise would do, if she does not gain the full benefit?—From the considerable amount of rent which has to be transmitted on account of absentees, and the large sum transmitted as surplus revenue, under these circumstances, I cannot conceive that our trade with England can be conducted otherwise than it is at present.

1418. You said you were the treasurer to the Dublin and Kingstown railway?—I am.

1419. Is that road now completed?—I do not consider it is quite completed.

1420. At present is it not so opened as to be useful to the public?—Yes, a very great convenience to the public.

1421. Have you carried on that road as yet any thing but passengers?—Yes, passengers and luggage.

1422. Is it your intention to carry other commodities on that road?—We obtained an Act of Parliament last Session for its extension to a wharf, now constructing within Kingstown Harbour, under the direction of the commissioners of that harbour.

1423. What was the amount of money expended by you in making the road?—Upwards of 200,000 *l.*

1424. Was not that expenditure of money most beneficial to the people in that part of the country?—Yes, a very large proportion was expended in weekly wages to labourers; no doubt it was extremely beneficial to afford employment to a great number of persons.

1425. Are you aware of the fact, that the Catholic clergy of that district have reported that the consumption of spirits diminished exceedingly while you were paying regular wages?—I was not aware of that gratifying fact.

1426. What has become of the people who were employed on that road at present?—I should suppose that a great number of them have returned to the country from whence they came.

1427. Have they taken with them capital, which they saved out of their wages while working on the road?—In many instances very considerable sums were saved by the parties who were employed; many have acknowledged to me that they have saved from 20 *l.* to 40 *l.*, and their general conduct, while the works were being constructed, was characterized with great industry and propriety, and I know that a very large proportion of them have returned home greatly improved as workmen, and in that point of view the result has been extremely beneficial.

1428. What number of passengers have you carried?—We opened on the 17th December, since which we have conveyed upwards of 350,000 passengers.

1429. At what rate?—The average price is about 7 ¼ *d.*

1430. Is that entirely a new communication, or to what extent is it new?—There was always a very considerable intercourse between Dublin and Kingstown carried on by cars; no doubt the railway has increased it very considerably.

1431. Can you tell the average length of time which the cars took in going, and the distance?—I should think the average length of time taken by the cars after they got in motion, was probably 45 or 50 minutes from Dublin to Kingstown.

1432 Are you not able to do it in 11 minutes?—Easily.

1433. Were there not two days on which there were more passengers than usual?—Yes; two days of the races at Kingstown; on one of those days we conveyed 8,900 persons, and on the other 9,700.

1434. Do

1434. Do you expect to keep up that number, or to increase it?—We fully expect the numbers will increase as the fine weather advances.

1435. Do you not anticipate an increase from the extension of the present line to the place of embarkation and disembarkation of passengers from and to England?—No doubt.

1436. Suppose this system of improvement was to be extended to other portions of Ireland, would there be a similar increase under the circumstances in which this improvement took place?—I am satisfied that if railways were judiciously laid out and constructed, they would be highly remunerative in Ireland, and they would in a great degree tend to create a traffic for themselves; I have no doubt upon that subject.

1437. Why has not the extension for which you obtained the Act of Parliament last year been carried into effect?—There was some difficulty raised by the Admiralty as to the manner we should cross the old harbour of Dunleary, and we are now negotiating with the Lords of the Admiralty upon that subject.

1438. With any probability of coming to a favourable conclusion?—I am greatly afraid their Lordships will require some terms from us which will prevent us from enjoying the benefit of the extension till public opinion calls for it.

1439. Are their Lordships aware of the injury which the public sustain in consequence; is it fairly put to them?—I scarcely think their Lordships are aware of what great advantage this extension would be to the public and the Post-office communication; I am inclined to think they attach much greater importance to the preservation of the old harbour than to these advantages.

1440. The advantage to the public and to the Post-office communication, if the line was adopted, would be very considerable, would it not?—Yes; at present we convey the mails, and we are obliged to send them in a small cart from the station at Dunleary to the jetty.

1441. Occasioning both delay, cost and risk?—Yes, there is some slight risk, but great inconvenience to the passengers.

1442. And a consumption of time unnecessarily?—Yes; I apprehend there is as much time consumed in conveying the mails the short distance from the Post-office to our station, and from our station to the jetty, as there is in conveying it the whole length of the railway.

1443. What are the objections of the Admiralty to your proceeding as the Act authorizes you to do?—The Act provided that we should only proceed as their Lordships should approve of; we acceded at once to that clause.

1444. What objections were raised?—That we encroached to a certain extent upon the old harbour of Dunleary, where there is a beach, which under certain circumstances they are of opinion might be useful.

1445. Is it a sandy beach?—It is not a sandy beach.

1446. Would it in your judgment be an advantage to the public to cross the old harbour of Dunleary in the way you propose?—It would.

1447. Why do you think it would be so useful?—It would afford great convenience as a wharf for the discharge of vessels.

1448. Have you any objection in going across that part to make an archway or two, so as to allow the boats any advantage they have at present?—I think there would be no objection to make an arch or two, sufficient to allow the boats to pass under.

1449. In your judgment, would you cut off any part of the harbour which is at present available to shipping of burthen?—I do not consider we should cut off any portion of the harbour ever likely to be available to shipping of burthen. I admit an extreme case might by possibility arise, of a vessel being driven in without anchor or cables, and she might take the ground more easily in the old harbour than any other situation.

1450. If a breakwater be formed at the mouth of the harbour, and with the state of the harbour itself, can you conceive a case, after that, in which it would possibly answer for a vessel to run for that strand?—I think it would be in the highest degree improbable; the advantage to the public bears no proportion at all to the immense cost it is proposed to subject us to.

1451. It might happen once in ten or twelve years?—I do not think it is likely to happen once in 100 years.

1452. Do you apprehend that the railway made in the way you propose would have the tendency to increase the swell in the harbour?—I think it would have such a tendency to a very small extent.

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1453. Is that one of the objections taken by their Lordships?—It is; but when the harbour is completed in the manner proposed, then such a result will be reduced so low as not to be of any really injurious effect.

1454. Your experience upon the railroad hitherto has had this disadvantage, first, that you have not been allowed to complete the Kingstown Harbour, and next, that in the winter season you have gone on as yet?—Yes.

1455. Now, in point of season alone, are you not aware you must naturally have a great increase of passengers to Kingstown in the summer season?—Undoubtedly.

1456. And, if you were allowed to complete the wharf, would it not lead to much greater accommodation to passengers, and greater facilities to them, with little additional expense in machinery and daily expenditure, if the railway was completed?—Unquestionably; and it would also have this advantage, of making the railway applicable to commercial purposes as well as to passengers; and I have no doubt whatever that the Liverpool and London steamers would find it to their advantage to discharge at Kingstown Harbour, rather than subject themselves to the delay and difficulties incidental to the River Liffey.

1457. You are aware that it is more necessary for steamers to keep themselves afloat than other vessels?—Yes; every vessel sustains a certain amount of injury upon taking the ground, and steamers, from their greater length, are much more liable to receive injury than other vessels are, the surface of the ground being generally uneven; and when we consider the vessel as the foundation on which machinery is erected, and that the value of that machinery depends on its accuracy, and that steamers are obliged to take the ground fully loaded, and sometimes partially loaded, and sometimes with only the weight of their engine and boilers, the consequences to the machinery are exceedingly injurious.

1458. Of course you are aware that no vessel can lie 24 hours in Dublin River without taking the strand?—It must take the ground twice.

1459. Have you found the present returns on the railway have been sufficient to afford a fair interest upon the capital?—The results have been highly satisfactory to the directors and the proprietors.

1460. What is the price of shares at present?—Eighty-two pounds per share; 60*l.* paid.

1461. You would not have been able to complete the work without a Government advance?—We should not have contemplated it without the prospect of receiving assistance from Government; we have received a loan of 74,000*l.* from the Board of Works.

1462. Have you found the terms upon which the loan is made as liberal as you could have expected?—No; I think it has been an error in the Public Works Act that a fixed and unvarying rate of interest applies to all loans except those to Grand Juries. I think it would have been judicious had Government or Parliament thought proper to encourage parties who come forward with a very large contribution of their own to co-operate with Government in promoting Public Works, that the rate of interest to them should have been much lower than to others who do not come forward with any such concurrent advance.

1463. Ought Government to charge more interest than they pay themselves?—Certainly not, in my opinion.

1464. Ought not Government to protect itself from any risk by charging a higher rate of interest?—Where parties contribute from their own resources one-half the cost of such a work, and where they must forfeit the entire of the advance before Government can lose one farthing, I conceive that the Government runs very little risk indeed; and taking into consideration the direct advantages which Government receives by putting such a quantity of money into circulation in the increased consumption of exciseable commodities, and in various other ways, they would be no losers, and that on the contrary they would be considerable gainers if they lent the money on much more favourable terms.

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Lunæ, 25° die Maii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

James Pim, jun. Esquire, called in; and further Examined.

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1465. SINCE you were here on Friday, have you received any answer from the Lords of the Admiralty to the Memorial presented on behalf of the Dublin and Kingstown Railway Company?—Yes.

1466. Is their answer favourable or not?—I am sorry to say that so far from affording increased facilities, increased difficulties are thrown in our way.

1467. What are the difficulties?—Our application was for liberty to postpone for a few years the construction of the proposed compensation harbour.

1468. What do you mean by compensation harbour?—Their Lordships have required that we should remove a portion of the pier of Kingstown Harbour, and add as much as would be cut off by the proposed extension of the railway from the old harbour of Dunleary.

1469. Are you willing to do that?—It would cost us a very large sum of money, without, as we conceive, any corresponding advantage to the public. We memorialized their Lordships for liberty to postpone the construction for a few years, offering to enter into any adequate security to construct it when called on. Their Lordships have agreed to allow us four years for the construction of the compensation harbour, provided we cross the old harbour of Dunleary on a series of arches, the expense of which would be in all probability as much as the construction of the compensation harbour. Therefore, in order to obtain four years' delay, we should have to incur an expenditure of several thousand pounds.

1470. Can the work be completed without taking off that part of the harbour?—It cannot.

1471. And are you still of opinion and prepared to say, that no injury would arise to the public from taking off that part of the harbour?—I consider the injury so trifling that it does not bear a comparison with the advantages which the public would derive from the extension of our railway from its present *terminus* to the wharf now being constructed by the Commissioners, particularly as regards passengers going to the packets, the conveyance of the mails, and above all making the railway applicable to commercial purposes.

1472. Which you will not be able to do unless this facility is afforded you?—Certainly not. I mentioned on the last day, with respect to commercial purposes, that I believed as soon as the wharf was finished, and our railway extended to it, that the London and Liverpool steam vessels would find it to be clearly to their advantage to come and discharge there; and I gave some reasons to which I would wish to add, that in addition to the injury which steam vessels sustain from taking the ground, which they cannot avoid in going up the river Liffey, the intercourse by steam between Liverpool and Dublin is so controlled by the tides of the Mersey and the Liffey, that, generally speaking, the steamer loses the tide at either port. If she sails as soon as possible with the tide from Dublin, she frequently arrives too late at Liverpool to save the tide, and sailing from Liverpool they are obliged to put in at Kingstown Harbour, and wait there for the tide to ascend the river Liffey; and I have no hesitation in saying, that three steam vessels between Kingstown and Liverpool would do as much work as four steam vessels between the river Liffey and Liverpool, because they could sail at such times as to save their tide into Liverpool; and Kingstown Harbour, being accessible at all times of the tide, there, of course, would be no difficulty. This is very important in the export of cattle by steam boats, which is a very extensive part of our Irish trade; and when cattle have been delayed in these boats, for any length of time, they are materially injured in their quality, and many of the exporters have told me that they would rather pay double freight if they were sure of having them landed without delay. There is another point of view in which the connexion of the railway with the wharf in Kingstown Harbour is important; nearly the whole of the intercourse between

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Dublin and Liverpool is carried on by the City of Dublin Steam Company, and who are extensively engaged in the navigation of the Shannon and the Grand Canal; and the railway affords an exceedingly desirable and easy communication between the Grand Canal and Kingstown Harbour.

1473. Is there any direct communication at present between the Grand Canal and the railway?—It crosses the Grand Canal dock. We have gone to a great expense in crossing the dock to make it applicable to commercial purposes, all of which will be useless unless we succeed in carrying the communication to the wharf at Kingstown Harbour.

1474. What are the dues payable to the city of Dublin corporation and the Ballast Board for vessels coming in?—I think the Ballast Board corporation receive a shilling a ton on all goods discharged in the port of Dublin. I may mention, that the Ballast Office corporation consider Kingstown Harbour as part of the port of Dublin; although they have never contributed any thing to the cost of that harbour, they collect the same dues upon all vessels that discharge there as if they went up the river Liffey.

1475. Was the whole expense of Kingstown Harbour defrayed by Government?—It was defrayed by Government. The port of Dublin contributed a very large sum to it, and until our communication with England was put upon a footing of coasting trade, upwards of 80,000*l.* had been contributed by the port of Dublin alone by a special local assessment; but I am not aware that the Ballast Board contributed any portion of the funds for its construction.

1476. Is that 1*s.* per ton, exclusive of light dues?—Yes, light dues are a separate tax.

1477. Have you any objection to put in the Memorial you presented, and the Letter you received in answer from the Lords of the Admiralty?—Not the least.

[*The following Documents were put in and read*:]

TO the Right Honourable the Lords Commissioners of the Admiralty.

The MEMORIAL of The *Dublin* and *Kingstown* Railway Company most respectfully showeth,

THAT your Memorialists in the year 1832 obtained an Act of Parliament, empowering them to make a Railway from Westland Row, in the city of Dublin, to the western pier of the old harbour at Dunleary, which latter point they fixed on under the expectation then very generally entertained, arising from the plans published by the Harbour Commissioners, that the landing pier would be constructed on the western side of the harbour, and nearly at the point to which their road now extends:

That subsequently the Government authorities determined on constructing a wharf for landing goods and passengers in front of the new harbour, at a distance of nearly half a mile from the site originally proposed, and which is now nearly finished:

That in consequence it became indispensably necessary, as well for the public convenience as the interests of the Railroad Company, that their line of road should be extended to the new wharf, as without such extension the road and harbour could not have any convenient connexion either for the conveyance of passengers or goods; Your Memorialists therefore, with the consent of the Commissioners of the harbour, obtained last Session an Act empowering them to extend their line to the new wharf, subject however to the control of Your Lordships as to the mode of crossing the old harbour of Dunleary:

That in June 1834 Your Lordships were pleased to grant this permission, on condition that the Railway Company should at the same time make an addition to another part of the old harbour, according to a plan and specification prepared by Mr. Cubitt, and which addition would cost your Memorialists about six thousand pounds.

That the Memorialists have constructed their Railway, which is now at work, to the extent authorized by their original Act of Parliament, at an expense of upwards of 200,000*l.*, and are now about to proceed with the extension to the new wharf, but being advised by several scientific and professional persons that the required enlargement of the harbour is not necessary for the public service or accommodation, and being aware that the Commissioners of the said harbour concur in this opinion, and are ready so to report to Your Lordships, as Memorialists are authorized by them to state, especially by Colonel Burgoyne, the chairman of that Board, who is at present in London attending a Committee of the House of Commons on Public Works in Ireland:

Your Memorialists, therefore, most respectfully request Your Lordships will be pleased to grant them permission to proceed with the extension of the Railway without requiring them in the first instance to construct the addition to the old harbour; and they are ready to give the most ample security for its construction, if after the completion of the Railway Your Lordships shall consider it necessary for the public service or accommodation.

[*To*

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[*To which the following Answer was returned:*]

James Pim, jun. Esq.

Gentlemen, Admiralty, 22 May 1835.

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I HAVE laid before the Lords Commissioners of the Admiralty your Memorial respecting permission to proceed with the extension of the Dublin and Kingstown Railway, without requiring you in the first instance to construct the addition to the old harbour of Dunleary, in compensation for the portion proposed to be cut off, together with a Report thereupon made by the Hydrographer who was directed to survey the same, as was communicated to you by Mr. Dawson's letter of the 8th ultimo; and I have it in command to acquaint you, that their Lordships, being desirous to afford every facility which may add to public convenience, and anxious at the same time to provide, as far as possible, against any thing being done which could destroy, or materially abridge, the utility of this harbour, now so valuable to small craft, cannot accede to your request, so far as to sanction the forming any solid construction across the basin; but they are prepared to allow the Railroad to be continued across the basin of Dunleary Harbour, provided it be supported on arches of not less than twenty feet clear span, with piers of not more than four feet in thickness, and not exceeding fifty-five feet in breadth.

I am, however, to add, that before any portion of this work be undertaken, due security must be given to the satisfaction of their Lordships, that within the space of four years the compensation harbour, as proposed in a previous Memorial, and as detailed by Mr. Cubitt in the plan and specification which accompanied it, and approved by their Lordships in their Secretary's letter of the 3d of June 1834, should be finally completed; and their Lordships' desire that you will lose no time in communicating to them the nature and amount of the security which you may be prepared to enter into for this purpose.

I am, Gentlemen, your obedient Servant,

John Barrow.

1478. In your evidence, on Friday, you stated that great benefit resulted from the expenditure on the Kingstown Railway, inasmuch as it formed a kind of school for the workmen?—Yes, I conceive great advantages, indeed, were derived by those workmen, from their experience, both in being accustomed to a better description of tools, and also from improved methods of carrying forward their operations in various ways.

1479. And they saved money also, which they carried home with them when the work was over?—Very many.

1480. Is it not evident that if these works were carried on in Ireland and executed, it would have not only the effect you have mentioned, but be the means of affording permanent employment for the poor by increasing cultivation; is it not evident that those works would be attended with the most signal advantages?—I have no doubt whatever of it; after the men had been a few months in our employment, we have always found an improvement in their manner of working, and in their appearance in every respect.

1481. Would not the facility of increased water communication be of essential benefit to the country?—I consider it would be an object of the first importance in Ireland.

1482-3. How would you propose to afford those facilities? is it by means of improving the navigation of rivers or by making canals, or by both?—By both. I consider the extension of canals of very great importance; whether we consider that a very large proportion of the cost of such extension is paid in wages to actual labourers, or whether we consider them with reference to the facilities they afford in the improvement of waste lands, more particularly the drainage of bogs, or in their ultimate consequences. I consider their introduction, and above all, their extension, as a matter of very great importance indeed. Our engineers, generally speaking, are partial to running canals through bogs; many years ago they were afraid. The consequence has been, that in some instances a bog has subsided to the extent of 35 feet, which is the case along some parts of the line of the Grand Canal, where the canal was originally constructed in a very deep cutting; it now stands on a high embankment from the subsidence of the bog; and in many places they cut it away for turf; and in the neighbourhood of Tullamoore, where the bog was originally so soft as, to use the expression of a Witness that was examined on the inquisition, that it would "*bog a snipe*," a stratum of brick-clay has been discovered, which is now worked to a considerable extent; thus affording not merely employment for a great number of people, but great advantage to the revenues of the canal; and in extending the Grand Canal from Shannon Harbour to Ballisnasloe, a similar result has taken place within a few years, but not to the same extent; I believe the subsidence of the bog has been from 18 to 20 feet.

1484. Do you mean to say that the bog is 30 feet lower now than when the canal was first made?—Yes.

1485. Is there also a large brick manufactory there?—Yes, at Tullamoore.

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1486. In the first instance, the subsidence occasioned by the drainage of the bog, the water communication caused it to be cut away for turf, and the consequence is that there is now most valuable ground in the immediate neighbourhood of the canal?—Yes.

1487. What is the average depth of bog at Robertstown now?—I cannot tell.

1488. What means have you of knowing the bog has subsided to the depth of 30 feet?—It was given in evidence before a Committee of the House of Commons, on Mr. Spring Rice's inquiry.

1489. You do not speak of your actual knowledge?—Not from actual admeasurement; I made inquiries of the directors of the Grand Canal Company, and of the engineer of the Grand Canal Company, and they both agreed as to the fact.

1490. And the consequence has been that the lands on both sides of the canal have been greatly improved?—Yes.

1491. In every case where a canal has been cut through?—In every case.

1492. In your opinion, would it be beneficial to extend the canal communication in Ireland?—Unquestionably.

1493. To what extent would you carry it?—I should propose that it should be carried to any extent that you can get private capital to co-operate with Government in their extension. I do not think the mode in which Government has hitherto promoted the extension of canals was judicious; they lent the entire of the cost, taking the security of the tolls on the portion of the canal that was so to be constructed. When you consider that the last ten miles of the canal must, of course, be the most unproductive, it is not to be wondered at that the security was found insufficient. In consequence of this apparent failure, capitalists are deterred from promoting public works of acknowledged utility. Although they appear to have been unproductive, in point of fact they are exceedingly productive. One of the extensions from Shannon Harbour to Ballisnasloe is paying more than 10 per cent. on its cost. Thus, if we suppose the distance (which is nearly the fact) from Dublin to Shannon Harbour to be 90 miles, and that the extension to Ballisnasloe is ten miles, and if the rate of toll be the same on both, it is clear that the additional trade brought down the main trunk will be nine times as great as the tolls received merely upon the extension. Now, if we take credit for the additional tolls which the parent trunk thus derives, the extension is eminently profitable.

1494. Do you think that the Government should take a security on the entire tolls thus brought to the main trunk?—I think they might have been fairly entitled to a proportion of the whole; but I should rather, in all cases, endeavour to induce parties to come forward with their own money, and co-operate with Government in the promotion and extension of works of the kind. I think it is essential, in order that Government should have the works economically and judiciously constructed and well managed.

1495. What works do you think will entitle the parties to call upon Government for assistance, either by way of loan or grant, or both?—For the introduction and extension of canals and railways, or public works of that description, which tend to facilitate intercourse, and are so valuable in their ultimate results, I think, if Government were to grant one-third of the cost, lend one-third of the cost at whatever rate of interest they might be enabled to borrow, and leave private capitalists to furnish the remaining one-third, an impetus would be given to works of that kind in Ireland to a very great extent, and I have no doubt whatever a very large sum of private capital would be subscribed for the extension of canals, and the introduction of railways, upon these terms.

1496. If those undertakings are as profitable as you state, how does it happen that private individuals are not induced to come forward?—The principal cause is want of confidence, arising in a very great degree from the failure of the two great canals, and the disastrous results of the St. Patrick's Assurance Company. I believe nothing would tend so much to restore confidence, and thereby tend to the promotion of desirable public works in Ireland, as some Irish undertaking being successful; and in that point of view, I consider the success of our little experiment of the Dublin and Kingstown railway of very great importance.

1497. Do you not think it would induce the capitalists of Ireland to advance their capital, if Government had an interest in watching over the expenditure, and taking care that there was no injudicious outlay?—Unquestionably, not merely in Ireland, but we should be able to get a large amount of capital from this country under such circumstances.

1498. Do you know of your own knowledge that you would get capital from this

this country under such circumstances?—I have no doubt of it; I know that, under circumstances of considerable discouragement, a large portion of the capital of the Dublin and Kingstown railway was subscribed in Lancaster, Liverpool, Birmingham and London, and the success of that undertaking would enable us with much greater facility to raise a very much larger sum.

1499. There was first a personal confidence, which afforded you facilities for it?—Yes, there was some personal confidence in the first instance, and that has probably been increased by the result.

1500. Do you mean to say that you got any additional subscriptions after Government gave the loan?—We did, and if it had not been that the parties were aware that Government was assisting us both by pecuniary aid and personal superintendence, a large proportion of the sum would not have been subscribed.

1501. Do you mean to say that the subscription list which you produced on the passing of the Act to the House of Commons, was not filled up till after the passing of that Act and you got the sum from Government?—The subscription list was filled up in the first instance only to the extent required by the Standing Orders of the House of Commons, which was about 75,000*l*. After the Commissioners of Public Works had agreed to make the loan to us, we raised the remainder of the capital principally in England, for there was very little additional subscription in Ireland.

1502-3. Have you known many other cases in which English capital has been employed in Ireland on Public Works in the improvement of estates or in the improvement of extensive manufactories?—I have not.

1504. Is there not some capital in Ireland which would be forthcoming for this purpose if these advantages were held out to them?—There is a large amount of capital in Ireland which would be forthcoming if we had confidence.

1505. To what do you attribute the failure of those two canals?—The cause of failure was not so much that the canals were constructed of their present dimensions, which is the generally received opinion, as that the lines were injudiciously laid out, running parallel to each other to a considerable extent; the want of skill in the principal engineers caused these canals to cost a very much larger sum than they ought. It has been given in evidence by Mr. Mullins, that the Grand Canal could now be constructed at from one-fifth to one-sixth of the entire cost. The Directors of those two canals were not obliged to exhibit any accounts, nor did the proprietors know in what state their funds were. The Directors continued for many years borrowing money to pay the dividends, and at the time when the net income of the canal was not sufficient to pay the interest of the debt. If the Grand Canal had been constructed for the sum which Mr. Mullins states it might now be, and was in the enjoyment of the present income, it would pay a dividend of 8 per cent. if not more.

1506. In your opinion, would the superintendence of the Board of Public Works give great confidence to undertakers to come forward?—It would.

1507. Would it be beneficial that either the Grand Canal or the Royal Canal should be extended further into the country?—Unquestionably; I consider the extension of our existing canals of much greater importance than the construction of new ones. I would say, that a canal communicating with Dublin, 100 miles long, is much more valuable, in a national point of view, than two canals of 50 miles. This is a question which England is interested in to a very considerable extent. When we consider the dense manufacturing population of Lancashire and the neighbouring counties, it is evidently a matter of no small importance that we should have the means of conveying our agricultural produce on the cheapest possible terms to Dublin.

1508. And, on the other hand, that the manufacturers in England should have the opportunity, at the least cost and expense, of sending their manufactures into the interior of Ireland?—Yes.

1509. Would not the benefit be reciprocal?—Unquestionably.

1510. What would be the extensions you would recommend as likely to return profit?—Two extensions of the Grand Canal were surveyed by the late Mr. Killaly, one from Ballinasloe to Loughrea, and the other from Mount Mellick to Roscrea; both would be very desirable.

1511. Did you ever hear of any extension from Ballinasloe to Tuam?—No; I never have.

1512. Do you know enough of the country to be able to state any extension of the Royal Canal that would be desirable?—I am not much acquainted with the affairs of the Royal Canal Company; of course, any general observations as to the advantages which must arise from the extension of our canals, are equally applicable

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to the Royal Canal as to the Grand Canal; and I have no doubt that it (the Royal Canal) might be extended with great advantage to the country and to the proprietors of the canal.

1513. In addition to this canal communication, would not great and beneficial results arise from the improvement of the navigation of rivers in Ireland?—I consider the improvement of the River Shannon is a matter of vast importance in every point of view in which it can be considered, well worthy the best attention, and the most liberal assistance on the part of Government. It would also be extremely desirable to afford some assistance for the improvement of the navigation of the Barrow.

1514. Would you not also recommend the improvement of the tributaries of the Shannon?—I have not seen them; but some of them might doubtless be improved with advantage.

1515. Has it ever occurred to you how the necessary expenditure for the improvement of the River Shannon should be raised?—My opinion is, that the navigation of the River Shannon should not be encumbered by tolls or any interference whatever; and of course private capital is not applicable to its improvement when no direct return is sought. I believe that the best, and ultimately the most desirable method by which Government could improve its navigation, would be by a liberal grant.

1516. For the whole sum?—Yes, for whatever sum would be necessary.

1517. Do you not think it is injurious to the general trade of the Shannon that a considerable portion of that should be assigned for the monopoly of a private company?—I am not aware of any positive disadvantage that has happened from that, but I am decidedly of opinion that the navigation of a great river like the Shannon should be perfectly free in all respects, whether as regards tolls or the interference of the Grand Canal Company, or any other body whatever, and that if Government should make a liberal grant for its improvement, it should be applied under the control and direction of its own officers.

1518. Do you not think that the persons in the neighbourhood of the Shannon, who would be considerably benefited by the improvement of the navigation, should also be obliged to contribute with Government for the improvement of the navigation of the Shannon?—The advantage to be derived by the proprietors along the banks of the Shannon would be so exceedingly unequal, that I cannot see how it is possible under such circumstances to apply any system of taxation that would be equitable.

1519. Why not apply a system of taxation in proportion to the benefits derived?—It would be very difficult to ascertain the amount to each.

1520. If you did not charge the individuals, would you not charge the counties or the parts of the counties through which the river runs?—The same objection would apply, and probably to a greater extent, because the remote portion of the county would derive little advantage, and the taxation would spread over all.

1521. With reference to building a pier on the Shannon, do you think it would be inequitable to charge the barony or the district to which the pier affords an outlet for its produce, with the expense of its erection?—I am not sufficiently informed to answer the question.

1522. In addition to this increased water communication, which you so strongly recommend, would not the making of roads of all descriptions, railroads and others, be of the greatest importance, and be attended with the most salutary benefit to Ireland?—I consider the making of roads to be an object of paramount importance to every thing else.

1523. Does Ireland stand in need of them?—Unquestionably, in many districts.

1524. Can you state any district in particular?—No, I am not acquainted with the remote districts in Ireland.

1525. Must not the making of all roads be attended with signal advantage?—Yes, the advantage is so great that I can scarcely conceive a country civilized, that does not afford adequate means of internal communication.

1526. In addition to the benefit to be derived by the district itself, would not the revenue be considerably increased?—It has been proved that the result has been uniformly that the revenue has considerably increased.

1527. Have you ever considered as to the manner in which the expenditure for making these roads should be obtained?—No, I have confined my attention very much to the best means of employing private capital in works of this kind.

1528. Has your attention been chiefly applied to railways?—Canals and railways.

1529. Your

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1529. Your attention has been directed to railways; is there any method you would recommend at present for railways to be introduced?—I think that the best method for the introduction of railways would be to lay out some great arterial line of communication, if I may so express myself, one that would afford the greatest amount of convenience to the country through which it would pass, without much reference to particular towns. It has been suggested by Mr. Cubitt, on his late visit to Ireland, to make Valentia Harbour the *terminus*; and it is a curious fact that such a line would also be the best that could be selected to afford the greatest amount of accommodation to the South and West of Ireland; whilst its *terminus* at Valentia Harbour would give it an importance in a national point of view unequalled by any similar project.

1530. Then you have turned your attention to the construction of this great national work of a railway from Kingstown to Valentia?—I have, and have brought the subject under the attention of the Directors of the Dublin and Kingstown Railway, and so far succeeded in impressing them with its importance, that they have entered into resolutions to receive subscriptions and to have a survey made of the line, and inquiries made whether it would be desirable that such a work should be prosecuted.

1531. Have you those resolutions with you?—I have.

1532. Be so kind as to hand them in.

[*The following Resolutions were then handed in to the Committee:*]

"AT a Special Meeting of the Directors of the *Dublin* and *Kingstown* Railway Company, held at their Office in Westland-row, in the city of Dublin, on the 15th day of May 1835,

"It was resolved,—

"THAT the project of establishing a Railway communication from Kingstown Harbour through the South and South-west of Ireland to Valentia Harbour, in the county of Kerry, claims the serious consideration of all who are interested in the welfare of Ireland and are sensible how deeply her condition must ever affect the general prosperity of the British Empire.

"That exclusive of the immediate effects of such a work in facilitating internal intercourse, encouraging trade and agriculture, and promoting the general improvement of the districts through which it would pass, its tendency to render the harbour at Valentia available to purposes of great national utility demands investigation.

"That in connexion with the proposed undertaking, and with the various railways completed or now in progress of construction through the different parts of England, it is conceived that Valentia Harbour, which is the most westerly and considered by some of the first nautical authorities one of the safest and most accessible ports in Europe, is capable of being rendered the great packet station of the United Kingdom, through which the intercourse between the British Islands and the New World, as well as the South of Europe and the Mediterranean Sea, might be carried on, exempt from the delays and dangers of a channel navigation, and with a degree of certainty, safety and expedition wholly unattainable by any other means; the communication between London and New York for example, which now usually occupies upwards of a month, might it is conceived be effected by the establishment of railways and steam vessels in little more than one-third of that period.

"That it appears expedient that preliminary inquiries should be instituted and surveys taken, with a view to ascertain the practicability of the undertaking, and to determine upon the line best calculated to combine the various advantages of which it may be susceptible; but we are of opinion, that a leading object of the inquiry should be to determine upon the most eligible course for a main railway to connect Dublin and Valentia without any considerable deviation from the most direct line, at the same time affording the utmost facilities to the principal towns of the South and West of Ireland to construct upon their own behalf connecting branch railways between their respective localities and the main trunk, the advantages of which, in their communication with the capital and the other towns along the line, would thus be extended to them at a comparatively small expense.

"That as the success of such an undertaking would be productive of incalculable advantages of the leading interests of the empire, while private capital would obviously be unequal to its execution, it can scarcely be doubted that if upon due investigation its practicability be ascertained and its tendencies approved of, the encouragement of Government and the aid of Parliament, co-operating with individual capital and enterprise, will be liberally afforded in carrying this great national project into practical effect.

"That a subscription list be opened for the purpose of raising funds to defray the expense of the preliminary inquiries and surveys; it being provided that the subscribers shall not be held liable for any demand beyond the amount of their subscriptions.

"That the Directors of the Provincial Bank of Ireland be respectfully requested to act as a London committee, to receive subscriptions and to co-operate with this board in carrying the foregoing resolutions into effect.

"That Messrs. P. Mahony and James Pim, jun. be hereby authorized to confer with the Directors of the Provincial Bank on this subject."

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1533. Then your plan would be to have one arterial railway, its object being to connect Dublin with the westernmost safe harbour of Valentia, and look for local advantages by branch railways to the great one?—Yes; I consider, by adopting that mode, a great saving would be effected.

1534. From your knowledge of Ireland, is it your opinion that that would present so many great advantages to both countries, England and Ireland, as to justify the making a survey at the expense of the Board of Works?—I should think it would: at the same time I would not like to establish a precedent, that the Board of Works should be called upon to defray the entire expense of any preliminary inquiry. I should wish in almost all cases the parties promoting public works should be obliged to put their hands in their pockets, and give the best evidence of their sincerity by so doing. I think it would be highly desirable if the Board of Works were empowered to co-operate with such parties in preliminary inquiries.

1535. What quantity of the expense of the inquiries are you able to state would be produced by private individuals for these surveys, which would be readily and cheerfully given?—My impression is, that the entire amount would be given. It is not so much the want of the pecuniary assistance of the Board of Works, as giving their sanction and co-operation in attending the inquiry, and the effect the result of those surveys and inquiries would have on the public mind, when it was known to be undertaken under their superintendence, and with their assistance; and I think they ought to contribute one half of the expense.

1536. All you ask from Government then is their sanction, and the confidence which would result from the sanction of Government?—I should like the principle to be established, that the board should have the power of co-operating with other parties.

1537. Has any estimate been made of the probable expense of the great line from Dublin to Valentia?—No estimate could be made till the survey was made.

1538. It must of course be very considerable?—Yes.

1539. How many miles is it?—Two hundred miles in length, and I think we may roughly estimate it at 15,000*l.* a mile, which would be 3,000,000*l.* sterling.

1540. Would the line be the same as the Limerick railway?—Not exactly the same.

1541. Would not a certain portion of the route to Kilkenny be included in the line you speak of?—Undoubtedly; by a branch railway or otherwise, there is no doubt the intercourse between Kilkenny and Dublin would be carried on along this road.

1542. How much do you suppose of the great line to Valentia would be made use of in the line to Kilkenny?—More than four-fifths of the distance between Dublin and Kilkenny.

1543. So that it would serve the common purposes of both so far?—Yes.

1544. From your knowledge of the localities, what opinion have you formed of the advantage of completing such a line as you have pointed out?—Valentia Harbour is the most western port in Europe; it is 12½° longitude further west than London, and 5½° more west than Falmouth.

1545. Would not Galway be as westerly a port as Valentia?—No; Valentia is the most western port in Europe, and possesses the advantage of having two entrances.

1546. And of perfect security?—I believe it to be an exceedingly safe and easily accessible harbour.

1547. Are you acquainted that with every wind, except the wind directly off the shore, which of course makes smooth water along the coast, that Valentia harbour is perfectly accessible at all times of tide?—I have understood so.

1548. What would be your plan for obtaining a sufficient sum of money to carry on this great work?—If the result of our inquiries should prove satisfactory, I propose that an application should be made to Government to know how far they would be inclined to assist a project which would manifestly be of so much advantage to Ireland, and of such great importance to England in facilitating the communication with America, with the South of Europe and the Mediterranean.

1549. The entire of the Western world?—Yes; the amount of assistance that I think would be absolutely necessary to induce parties to subscribe their own funds, would be to the extent I have previously stated; namely, a grant of one-third of the cost, a loan of one-third of the cost at whatever rate of interest Government might be able to borrow; and that the private capitalist should provide the remaining one-third.

1550. The

1550. The entire of the two-thirds being an advance from Government, part should be first reimbursed to them, at a certain rate of interest and a certain per centage?—Yes.

1551. By that means the proprietors would have the advantage of the one-third which the Government made as a grant; would not Government in that case be entitled to stipulate that the tolls should not exceed a certain per centage?—I have always been of opinion that the parties managing a concern of that kind should have the entire control of the tolls, and if they consulted their own interest they would find that low tolls would produce them the greatest revenue.

1552. Do you not think it reasonable in case the proprietors received on their advances more than 10 per cent. that they should pay to the nation the amount of the grant before they derived higher profit than 10 per cent.?—I think such a stipulation would be exceedingly fair and reasonable; the amount, under those circumstances, to be repaid by certain fixed instalments.

1553. And likely not to interfere with the obtaining sufficient capital to complete the line upon the terms stated by you?—I think that would not throw any difficulty in the way.

1554. You must be aware that the prospect of repayment of any thing advanced by Government to Ireland would be the greatest inducement, and do away with a great many difficulties in getting the grant?—Clearly.

1555. Have you any thing else to suggest as to the pecuniary inducement to Government to make the grant?—The great inducement to Government should be exclusive of the advantages which are common to all other undertakings of the same kind in Ireland, providing for the employment and improving the condition of the people, and so forth; that it would facilitate to such an extent all our commercial relations with the New World and the South of Europe; the consequences are manifestly of great importance, in a political point of view, whether with reference to the state of Ireland or otherwise.

1556. Are you aware that, in a political point of view, for the maintaining, and when it is necessary restoring, tranquillity, that the facility of transferring troops must always be a great object of the Government in such a country as ours?—It is; and strong representations have been made to Government with reference to Valentia Harbour some years ago, unconnected with the railway communication. I believe the general practice to be for troops to serve two years in England, and they are then sent for two or three years to Ireland, and then generally sent to the colonies; and for want of desirable places of embarkation, the practice has been, at considerable expense and inconvenience, to have the principal depôt at the Isle of Wight, in consequence of the facilities which it affords for embarkation; at the same time it is one of the dearest, if not the dearest, depôt in the United Kingdom; and if there were the means of embarkation at Valentia, and a facility of communication with it, the stream would then go in its natural channel.

1557. Do you not think the employment of people upon public works would go far to tranquillize the country, and to render unnecessary the transmission of those troops to Ireland?—Undoubtedly the effect of such an expenditure upon Public Works would be to improve the condition of the people, and thereby tend to preserve and restore tranquillity in the country. We always find the people tranquil when they are well fed.

1558. Would you not think it necessary, after the completion of this work, to keep a certain number of Public Works in operation, to perpetuate the good effects you have spoken of?—The inevitable consequence of the construction of Public Works, which tend to facilitate intercourse and the conveyance of produce and manure, is to provide increased employment for the people; and the men in the first instance become better labourers while on these works, and the consequence of their construction is, the means of providing future employment of a permanent character.

1559. Then it is not so much to the actual employment of the labouring classes of the population that you look for the improvement of their habits, as the increased communication?—To both; I consider the improvement of their habits by increased communication exceedingly important, at the same time I am not blind to the advantages that must necessarily arise from having constant employment as a necessary consequence arising from the construction of the works.

1560. It tends to provide employment?—Yes.

1561. Is it not found, in the execution of any great work, that on its termination the sudden cessation of the employment occasioned by that work has very often

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caused the people employed to become in a worse state of poverty?—I have never known a case of that kind. I have made inquiries of many contractors for great works, and they have uniformly said, that the practice is, towards the close of any great work of the kind, that the men are drafted off gradually; they are not usually dismissed in very large numbers, and their improved habits as workmen enable them to obtain employment in their respective districts where they come from with much greater ease than before, and they locate themselves in various ways in employment connected with the works.

1562. Is it the usual practice of contractors at present, towards the close of the work, to draft them off in small lots to different parts of the country, and at what period of the work do they begin that operation?—They are dismissed by degrees.

1563. Is it the practice of contractors to do so?—I believe it is, uniformly.

1564. Does not the increased cultivation of the land produced by making the roads give employment for the people?—Unquestionably.

1565. Have you found that labourers in Ireland were sufficiently skilful in doing their work, or that they become so?—I believe them to be as skilful as any men upon the face of the earth.

1566. Are you obliged to have any labourers from England now with respect to the railway?—Connected with the locomotive engines, we are obliged to have some English engineers, but we are training up young men to fill their places.

1567. With a prospect of success?—I may say with a certainty of success.

1568. Would not work of this kind, by affording employment to the people, tend very much to diminish the number of labourers that annually emigrate to England for employment?—Undoubtedly.

1569. And thus diminish the burden on the poor rates in this country?—If the Irish labourer tends to increase the amount of poor rates, it would tend to lessen the burden.

1570. Is not the great want in Ireland the want of a demand for labour?—Undoubtedly, it is one of the greatest evils we have to contend with.

1571. And is not the low price of wages also a necessary consequence arising from it?—Yes.

1572. Would not wages be raised by these Public Works?—Yes, to a certain extent; by increasing the demand for labour, the labourer would be able to obtain a higher rate of wages.

1573. And their condition would of course be much improved?—Yes, that would be the natural result.

1574. Can you state what is the general rate of wages?—No.

1575. What did you pay on the Kingstown railroad?—Sixteen-pence a day was the lowest rate of wages; and we endeavoured to employ the men as much as possible on task work, by giving them small contracts, by which they were enabled to earn a much higher rate.

1576. Did you find that beneficial to the undertaking?—Unquestionably.

1577. Did you pay them weekly?—We stipulated that the money should be paid weekly, and that each man should be paid his own wages; that is to say, each individual should be paid by a person on behalf of the contractor the precise amount of wages which he himself had earned; that it should not be given in the bulk to one man to divide with the others, which, generally speaking, sends them to public-houses to make the distribution, where they would spend a considerable amount of their wages before they left. The money was handed to them and paid while on their work; a practice which I think extremely desirable to follow in all public undertakings of the kind.

1578. Are you of opinion that money payments are always desirable?—Yes, and I should add that the money was paid on the Friday, to enable them to provide their necessaries at the Saturday's markets.

1579. From your knowledge of Ireland, can you conceive any public undertaking more useful than the extension of such railroads across the country as you have spoken of?—I cannot imagine any project which has so many and such strong claims for the support of every person who wishes well to Ireland; there are features of peculiar interest in it which I never heard of in any other public undertaking.

1580. Having considerable experience in the money market in Ireland, have you any doubt upon the plan you suggest, one-third grant, one-third loan, one-third private subscription; that the one-third private subscription, whatever the amount might be, there would be no difficulty in getting?—I am quite satisfied if our

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our directors, after the survey has been made, and the inquiries which they have in contemplation, appear satisfactory, should recommend the project, they will not find much difficulty in raising the requisite funds.

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1581. Have you any other suggestion to offer to the Committee?—I think it may be satisfactory to the Committee to be informed, that notwithstanding many predictions, that there never was any attempt whatever to injure our works on the Dublin and Kingstown Railway, either during their construction or since they have been opened.

William Cubitt, Esquire, called in; and Examined.

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1582. I BELIEVE you are a civil engineer?—I am.

1583. I believe you have been engaged in Public Works in England and Ireland?—Yes.

1584. Are you now engaged in any?—I am now engaged in carrying the Ulster Canal into execution.

1585. Do you find any difficulty in getting a sufficient number of Irish labourers?—No.

1586. Do you find any difficulty in bringing them to an adequate degree of skill to do the work?—Not any.

1587. Do they acquire that skill as rapidly as labourers in this country?—They do, with the introduction of about one-tenth of experienced English workmen in the same line of business.

1588. Why do you want English workmen?—To teach them the operation.

1589. Do you mean to say they acquire as rapidly as raw English labourers would sufficient skill?—I find them quite so, and there is a great advantage in pursuing that mode of work with Irishmen, in my opinion.

1590. What do you pay as wages per day to the Irish labourer?—The wages for day work varies from 1*s.* to 1*s.* 6*d.*, but at task work they will earn upwards of 2*s.*, and by employing workmen in districts through whose land we pass, every thing goes on much more quietly and more satisfactory to all parties.

1591. Then in time it would not be necessary for you to have any English labourers?—Certainly not. It frequently happens that when men get experienced in canal work, and have not sufficient work of the same kind in that country, they emigrate to Canada and America after being taught in Ireland, when, if sufficient employment of the same kind was held out in that country, I believe they would remain there at good wages.

1592. Have you directed your attention to the railway from Dublin to the harbour of Valentia?—Yes, I have, and I think I might say that the inquiry upon that subject originated in a letter I wrote two or three months ago from Dublin to an officer in the Admiralty, stating the advantages that would result from such line of communication; I had heard of the scheme of a steam navigation from Valentia to Nova Scotia, but not that of a railway from Dublin to Valentia.

1593. Can you state shortly what the particular and striking advantage would be of such a railway?—I consider it in the light of a main line of railway without reference to any particular place; as a main artery from one to the other, and which would connect London with Valentia *via* Dublin, and afford the means of passing despatches or goods or troops in the quickest manner possible from one part of the kingdom to the other, and also serve as the means of bringing the great towns in the southern and west parts of Ireland in immediate connexion with Dublin by means of branch railways coming into the main line.

1594. Would not the facility of communication to all foreign parts be very much increased also?—Certainly; Valentia is the most western point in Ireland, and the meridian of Valentia is west of Cape Finisterre; consequently vessels, sailing packets, can always take their departure from Valentia with any wind, when they could not get out of the English and Irish channels.

1595. Do you know that the harbour of Valentia itself has great capabilities?—I understand all that from the charts; I have not seen it personally. Also it would afford a communication with other parts of Europe *via* Liverpool and Dublin to the East and West Indies, to the Mediterranean and the Americas.

1596. And of course all the expense, the wear and tear of the packets at Falmouth from thence till they clear Cape Clear, would all be spared?—Yes, and what is of great importance, the time would all be saved.

1597. Then, if I understand your evidence, you look upon this work as one of

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very great importance to Great Britain as well as Ireland?—Yes; I look upon it as almost making the south and west parts of Ireland a piece of this country, the communication would be so direct and so quick.

1598. With respect to the branch roads joining the main line, which you call the artery, what would you do as to them?—I consider the artery line as the great work to be done with the assistance of public money, and an account should be kept of all the traffic upon that line. All the branches would be subsidiary to it; they would be local concerns only; there would be a constant carriage of goods and passengers on the main line, which would go to the general account; and I think that one main line with branch railroads would be better than a separate railway from Dublin to different places.

1599. Would the economy be very considerable?—The economy would be very great in time and money.

1600. Have you made any calculation of the difference?—A calculation of the difference I am not able to make without going particularly into the details.

1601. Are you aware in the United States of America railroads of considerable extent have been made at the expense of the public?—I understand a great deal is done in America by the States.

1602. And have not such undertakings been attended with profit?—I understand so; I think the Americans are wise in making railways; having a new way to make altogether, they do it to so much greater advantage than in an old country where there are many means of communication established.

1603. Do you think that Government ought to be the originators of this line, and that it should not be left to a private company?—I do not think Government should be the originators; I think the origin should be from private enterprise, supported by Government. I do not think Government should turn the undertakers of railways of any kind; yet I think that Government should support it upon some definite plan.

1604. What degree of support do you think Government should give to it?—I think that Government should give a grant of one-third, and a loan of one-third, at three per cent., with a sinking fund of not more than two per cent., making five per cent. in all.

1605. Would you place any limit upon the dividends received by private parties subscribing their capital?—I would till such time as the loan is paid off.

1606. Do you know at what rate Government has lent money to carry on the Leith Harbour?—They lent money formerly to the Leith Harbour, immediately from the Exchequer, at three per cent., with a sinking fund of two per cent. With respect to that harbour, the question is now under the consideration of a Select Committee of the House in what way the terms of the grant should terminate.

1607. Where the Government in America does not make a road, does it not allow a certain sum for the original survey; are you aware of that?—I am not.

1608. Do you think, after the preliminary survey has been made, if the thing goes on, that it would be proper that a sum should be advanced from the public purse towards the prosecution of the necessary inquiries?—Yes.

1609. Do you think there is any chance of obtaining private capital in England for carrying on this railway?—I should think perhaps some.

1610. To what cause do you attribute the indisposition of investing English capital in Ireland upon Public Works?—I consider the English capitalists do not conceive their capital is quite safe; that is the general feeling; men will not readily invest their money in Ireland; they do not consider it quite safe.

1611. Would you propose to carry into effect the whole at once, or by small portions at different intervals?—The whole at once would inspire the greatest confidence; they never would believe a person who sets about a piece of a measure.

1612. Could the different companies interested in Ireland in railways, could they not contrive to unite in carrying on the railways in common with Government?—There might be different projects for the West of Ireland, and companies formed, and it would be competent for all those persons to promote the scheme they have for the general benefit.

1613. Have you contemplated the possibility of pneumatic railways succeeding?—I have not contemplated that succeeding.

1614. You have been lately in Ireland?—I have.

1615. In your opinion would not the assistance you refer to be given by Government, be money profitably laid out for the benefit of the public?—I have no doubt of it.

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1616. And would tend to the increase of the consumption of exciseable and duty-paid articles?—Undoubtedly.

1617. And would it not raise the price of labour in Ireland?—Certainly.

1618. Do you think it would have that effect in England?—I think it would have that effect.

1619. Is there any thing else which you would like to suggest to the Committee?—No, I am not aware of any thing else.

Charles Vignoles, Esq. called in; and Examined.

Charles Vignoles Esq.

1620. I BELIEVE you are a civil engineer?—I am.

1621. Were you concerned in the Dublin and Kingstown railway?—I am the engineer of the company.

1622. Are you aware, notwithstanding many obstacles, that has become a successful undertaking?—Yes.

1623. Have you been a good deal through Ireland?—I have; I am a native of that country.

1624. Can you state whether, according to your judgment, it is quite practicable to have a railway from Dublin to Valentia?—There are existing plans, levels and other documents which I have gone through, which added to an examination of several parts, enable me to state that it is a perfectly practicable line; much less difficult than that between London and Liverpool.

1625. And comparatively less expensive?—I consider three millions would cover the cost.

1626. In your judgment, would great national advantage result from such a railway?—I think so; I have no hesitation in expressing my opinion that it would. Two years ago I was first employed by gentlemen to examine a line out of Dublin, with a view of forming the first portion of a railway communication with the West and South of Ireland. Since then, Mr. Cubitt has put forth his project, which may be called imperial, and is one much more worthy of consideration than that to which my attention was directed; his scheme is the extension and perfection of the one for which I was originally employed.

1627. You mean that from Dublin to Valentia?—I do.

1628. Have you made a statement concerning the railway and its advantages?—I have.

1629. Will you hand that in?—[*The annexed Document* (A.) *was then handed in.*]

(A.)

THOUGHTS on the *Dublin* and *Valentia* Railroad.

THE advantages afforded by railways have now become sufficiently appreciated. They comprise the civilization and employment of the labouring part of the community, the distribution throughout the whole country of useful expenditure, which the localization of manufacture and capital has before secured in monopoly to particular districts, the equalization of the value of property, and more especially, rapidity and economy of communication, thereby affording the means of obtaining an intimate knowledge of all the wants and interests of the remoter provinces.

Consequent on the appreciation of these objects has been the progress of the railway system throughout Europe and the United States.

In Great Britain, the successful experiment between Liverpool and Manchester gave birth to numerous projects, of which some have been already accomplished, and there are now in profitable operation nearly 250 miles* of railway in various parts of that country.

Within three years the railway from London to Liverpool will be completed, besides various other great connecting lines, altogether 400 miles† of railway are at this time in progress

	Miles.		Miles.
* Stockton and Darlington, and Branches	40	Wigan and Newton and Warrington	14
Liverpool and Manchester	32	Clarence Railway	30
Railways near Glasgow, and Branches	25	Edinburgh and Dalkeith	10
Leeds and Selby	25	Canterbury and Whitstable	8
Dundee and Newtyle, N. B.	12	Seaham Railway	7
Hotton Railway, &c.	10	Bolton Leigh and Kenyon	10
St. Helen's and Runcorn, and Branches	12	And several others.	
† London and Birmingham	112	Preston and Branches	18
Grand Junction	80	Bolton, Bury and Manchester, and several others	15
London and Southampton	80		
Newcastle and Carlisle	60		

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progress of construction in England alone; applications for 200 miles,* including the Bristol line, are before Parliament; and companies are now forming for upwards of 500† miles, among which is the connexion between Glasgow and Edinburgh, and between York and London; in all nearly 1,400 miles.

In Belgium, the first portion of the chain of railways between Antwerp and the Rhine has, within these few days, been opened to the public. Hamburgh, justly alarmed, is negociating with Hanover on one bank of the Elbe, and with Prussia on the other, to secure a railway through one of those kingdoms into Saxony, Bavaria and Bohemia, which will not merely advantage her present trade, but bids fair to divert to *Hamburgh* the commerce of *Trieste*, for the supply of Central Germany with colonial produce and manufactures.

France has tried the experiment successfully near Lyons, and the Government have publicly declared they will become partners in the lines now in progress from Paris to the coast. Even in Austria there are two very extensive lines of railroad at work.

It is, however, in the United States where the greatest impulse has been given to railways. Many hundred miles are already executed, and vastly more are in contemplation.

In the small state of South Carolina a railway of 150 miles in one continued line is in actual operation. The whole population of that state is scarcely 300,000 souls, wages are 5*s*. a day, and capital at seven per cent. interest; yet private enterprise chiefly has executed this great line, which is now by its success proving practically the truth of the principle long established in the minds of persons competent to judge, that railways create their own sources of revenue.

It seems incredible, that in Ireland, with a population of 8,000,000, multitudes of them in beggary, and too often in starvation, from want of work, with wages at from 4*d*. to 1*s*. a day, and money at four per cent., one short railroad alone has yet been executed.

However philanthropists and politicians may differ about many of the causes of the sufferings of the Irish poor, however various the proposed remedies, all unite in declaring that want of employment for the labouring classes is the leading evil, requiring the application of an immediate remedy, and all experience shows that an expenditure of money on Public Works has invariably introduced comfort and peace to the most destitute and most disturbed districts, and has increased the public revenues of the country in direct proportion to the amount of money expended. Public works, the effects of which have the great value of improving and increasing internal intercourse, trade and manufactures, must be the most desirable of any, and more so when their ultimate tendency will be to combine facilities for foreign communication, and particularly those of a commercial nature.

Such public works are railways, the new means of communicating on land, by steam; a power which on water has already been so beneficial to Ireland.

Railways possess extraordinary claims on the favour of the Legislature; claims wholly unconnected with their efficacy as instruments of commerce and avenues to wealth and prosperity; claims more especially paramount as regards Ireland, since, in the construction of railways, whatever might be the cost, two-thirds of the money expended must be distributed in weekly payments among the labourers of that country, who need employment so much.

The great success of the Dublin and Kingstown railway, and its daily-increasing revenue, while many and prudent persons had anticipated utter failure, has laid the foundation for the promulgation of the present project. The experience which has been gained in the arduous task of conducting the Dublin and Kingstown railway through a series of unparalleled obstacles, difficulties, prejudices, and even obloquies, will be made available in applying the same searching spirit of inquiry into all the details of level, direction, expense and revenue, in respect of the greater undertaking now proposed.

The true principle to be proceeded upon has been already laid down by Mr. Cubitt; viz. to ascertain the best direction for a main-trunk line for a railway from Kingstown Harbour through the South and South-west of Ireland, passing about midway between Cork and Limerick, and affording the greatest accommodation to all the towns within 30 or 40 miles on each side, but without reference to particular places or individual interests.

It will be presently explained, that the route is naturally divisible into four principal and distinct sections, one or more of which may be in the first instance carried into effect, giving time for maturely considering the eligibility, advantage and prudence of proceeding hereafter to the Harbour of Valentia, creating there a great out port and packet station, to and from whence the future current of commerce and travelling will be directed.

Such a main-trunk line of railway as the one proposed, would be the means of saving the unnecessary outlay of capital in making a number of independent lines to each town. The leading feature of the railway system is to connect the extremes of kingdoms with their capitals, and to leave the large towns in the various districts pervaded by the great track to construct their respective branches to the nearest or most eligible points. The local dealers and proprietors of lands, houses and establishments will rapidly fill their respective subscription lists, to accomplish the few miles of railway from each town. Numerous communities will feel the necessity of forming, and will readily (and generally economically) make connecting branches to the main trunk, for they will soon discover,

to

* London and Bristol, 125 Miles, and four or five others.

† London and York and Cambridge and Norwich - 280 Miles.
London, Ipswich and Yarmouth - 120 Miles.
Edinburgh and Glasgow - 50 Miles.
London and Brighton - 50 Miles.
And several others.

to use the words of a popular paper, "that those places that have no railways, or connexion with railways, will be no places, and their inhabitants nobodies." It is equally inconsistent to expect that the grand arterial railway should meander like the old roads and canals from town to town, or that every city should have its distinct railway to the capital.

All such constructions would prove nearly equally failures; whereas the institution of a principal and leading line will derive its prosperity and success by numerous ramifications from its trunk; and the establishment of other lines as offsets will take place from the lateral branches, which will themselves extend, while towns and villages sufficiently near will make good roads; and thus a succession of employment to the working classes be created. And though the branch railways might repay the expenditure in but little, or even not at all, still the inhabitants and proprietors of each town and its surrounding neighbourhood (and these will be the natural subscribers to each branch line) will be benefited individually and collectively, and if they do not greatly increase, will at least retain their trade or connexions, which would otherwise pass to towns and districts more sensible to the advantages of the railway system, or more prudent and more active in forming that connexion with a communication which is destined by its peculiar facility, economy and despatch to create great changes in the channels of trade, and of social and probably of political intercourse.

The existence of a great mass of valuable and accurate maps and levels, formerly executed at the public expense by the Bog Commissioners, the Post Office, the Commissioners of Inland Navigation, and by various public and incorporated bodies, and which comprise the whole distance from Dublin to Valentia, and extend over a great breadth, and the general knowledge which has been obtained, or is possessed of the topographical features of the country, enable an assurance to be made that no material barrier exists to the execution of the whole line, and that, for the principal part of the way, the greatest facilities exist. The point of division between the first and second sections of the work will be in the vicinity of Maryborough. The separation of the second and third divisions will be at that point where the railway now proposed would intersect the intended Limerick and Waterford Railway not far from Cahir. The dividing point between the third and fourth sections will be in the great coal-field which lies between the Boghra Mountains and the banks of the Lower Shannon; the precise place cannot be determined until all the passes have been carefully examined; but the present impression is, that such point will be in the vicinity of the Drumagh Collieries; the fourth section will pass near Killarney, to terminate at Valentia.

A glance at the map of Ireland will show, that the first section would be well adapted as a common route for all places from Galway round the west and south coast to Waterford; and thus the first 60 miles of the main trunk would be equally available for the districts comprised within this great sweep; and even if not extended further, the railway must be of the very greatest public utility.

But if, on subsequent inquiry, the prospects should be encouraging, the second section would carry the railway a stage further, and to a distance of 100 miles from Dublin, and make a connexion with the line of the intended Limerick and Waterford Railway, calling into activity the dormant powers long since bestowed by Act of Parliament on that incorporated company.

As Bristol will soon have its railway from London, either by Basingstoke or Reading, an important and immediate route, particularly for our internal produce and exportation, would then be opened to the respective advantage of the central and southern counties of Ireland and the West of England.

The third section would carry the railway into the great western coal-field, and approach within 20 or 30 miles of the highly important flourishing commercial port and city of Cork; it would connect the limestone and coal districts of the counties of Tipperary and Cork, and present great advantages, and offer means of accommodation to towns and large and fertile tracts at present almost entirely cut off from all connexion with the out-ports and the capital. The railway would, in this case, extend about 150 miles from Dublin.

But on entering the fourth section, and carrying the line to an ultimate *terminus* at Valentia Harbour, on the very verge of the Atlantic Ocean, the undertaking ceases to be considered in a local point of view, and becomes a great national work, in which Great Britain, Europe and the Americas would be as much interested as Ireland. We should, in fact, have arrived at a port which nautical men, statesmen and many acute inquirers have at various times, and under different circumstances, and without communication or connexion with, and even without knowledge of each other, recommended as the most eligible Harbour for the foreign arrivals and departures of the United Kingdom.

The attention of the Government has often been called to the eligible situation of Valentia Harbour, and the highest naval authorities have given evidence to Parliament of the peculiar combination of advantages which it possesses as a packet station. Captain Beaufort, R.N. and Hydrographer to the Admiralty, states, that "the first object of all vessels bound to either America, to the South of Europe or India, is to get far enough out of the channel to be able to adopt either tack without fear of the land; the next object is to fetch to the westward of Cape Finisterre." By sailing from the harbour of Valentia, the most westwardly port in Europe, both these objects are secured. Captain Beaufort further states, that "whenever possible, a packet harbour should have two ways of exit,

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like Spithead, for instance." Valentia Harbour possesses this advantage, having two easily practicable inlets to an excellent receptacle for shipping, capacious, safe and land-locked.

The intervening transit between Valentia (the nearest point of land in Europe to America) and the harbour of New York, is unobstructed by islands, rocks or shoals, and the distance being less than 2,700 miles, may be traversed by steam packets, such as those now running between Kingstown Harbour and Liverpool, in 10 or 12 days. London will thus be brought within a fortnight's distance of the Canadas and the United States. Liverpool may be reached on the completion of the English Railway in ten hours from London; the average passage (looking forward to no increased speed in steam boats) from Liverpool to Kingstown is 14 hours; and by this proposed railway of 200 miles from Kingstown Harbour to Valentia Harbour, the run across Ireland would be made in 10 hours. In all 34, or at most 36 hours from London to the shores of the Atlantic, and on great emergencies and with a favourable water passage, it may be reduced to 26 hours. The fact is astounding, almost incredible, but it is undeniable.

If, as stated by Captain Beaufort, "the establishment of a post-office packet station at Valentia would insure a saving of four or five days in the voyages of sailing vessels," can it be doubted that with such a ready connexion with London, Valentia Harbour will not be the great out-port of the United Kingdom and (passing rapidly over the chain of intermediate reasoning) of France and all northern Europe. In short, Ireland would become the great highway of nations from the Old to the New World,—the thoroughfare between the two hemispheres,—and (to quote from an energetic letter which appeared in a New York newspaper of last December, from which some previous ideas are drawn, and in which the establishment of a harbour at Valentia is discussed) "The occupation of the public mind and the labourers of Ireland in such an enterprise, and the constantly increasing fruits of its progress, would do more to pacify the fearful dissensions of the people and ameliorate their lamentable condition, than any legislation of even the best disposed Parliament."

When the English tourists who now perambulate the mountains of Wales and pass a few happy days or weeks of each summer in contemplation of the beauties of the Lakes of Cumberland and Scotland, can transport themselves in 36 hours at the expense of 5*l.* to the county of Kerry, and tread the borders of the Lakes of Killarney, can it be doubted but that a vast influx of visitors of all classes of society would ensue, enriching with their superfluous wealth, and civilizing by their presence, the inhabitants of the wide ranges of moor and mountain district, which lately and still to a great degree are the remote abodes of poverty, sickness and crime.

The Kingstown and Valentia railroad would further enable a very considerable saving to be made by a reduction of the military force of Ireland, and by the diminution of the expense of moving troops, particularly when intended to be embarked for foreign stations, after having had their usual period of service in Ireland; the quickness, facility and economy of transport will carry infantry, cavalry or even artillery, without fatigue to any point or place required for one central depôt; and the embarkation of the forces at Valentia, independent of the reduction of expenditure, would generally gain a week in an Atlantic voyage; all these are advantages which military men can well appreciate.

There is one more and one most important national point of view in which the railway from Kingstown Harbour to Valentia is to be considered, namely, its intimate connexion with, and the means it presents of carrying into effect, the reclaiming of the bogs, which some years since held so important a station in the inquiries concerning the best mode of improving the condition of Ireland, and moreover of forwarding in the most effectual and the most economical manner, the enlightened and benevolent views and recommendations of the Committee on the Irish Poor.

Experience on the English Moss lately opened by the construction of the Liverpool and Manchester Railway, has shown that by an improved and economical mode of drainage, the bogs of Ireland (which in general resemble and are for the most part sounder than the celebrated Chat Moss) may be drained and prepared for the husbandman at an expense of 5*l.* or 6*l.* per acre, producing immediate and excellent crops.

It is, therefore, a gratifying feature in the project, that the line of railway will pass through or in the immediate vicinity of the great bogs in Kildare, Queen's County, Tipperary, Cork and Kerry, which 25 years since were so minutely surveyed, levelled, examined and reported upon by the aggregate engineering talent of Ireland, whose accurate documents remain in aid of the execution of the intended purposes, since almost forgotten, but now capable of being beneficially and instantly revived. What a field would be opened for the exercise of individual benevolence and enterprise, and national encouragement! A Government grant of inconsiderable amount would place in every barony of the bog districts competent overseers, accustomed to the mode of improving the English mosses, properly to direct the labour of the agriculturists, and would remunerate one or two principal managers to lay out and superintend the general system. A premium to the farmer, small rewards to the intelligent labourers, the encouragement of all by loans of various but minor amounts, and the introduction of a few model agricultural schools, would produce effects vastly beneficial, and at small expense.

The railway would cheaply and readily transport the produce of those improved bogs to markets, and to the exporting vessels, and being intimately connected with the ports of Waterford and Kingstown, save all false expense of intermediate cartage, agencies, &c., only one moving of the load occurring between the farm and the ship.

Should it be considered by the Government expedient, as can scarcely be doubted, that such

such a public work should be commenced forthwith, and should any fiscal difficulties arise, the creation of Government debentures on which the Government would be responsible for the payment of dividends, forms a ready available and marketable security; and the increased consumption of exciseable articles, in the distant parts of the country, will doubtless, as proved from all former works, add a larger sum to the public purse than would be necessary, not to advance, but simply to guarantee.

With such prospects and such probabilities, can there exist a doubt of obtaining ample and immediate encouragement from the Government? or can it be doubted that when the gentlemen now forming a Committee to promote this railway shall have applied themselves to the prosecution of the requisite inquiries on which to ground a future detailed report, but that they will be able to bring forward an irresistible case for the largest amount of co-operation of legislative aid with private capital?

Charles Vignoles,
4, Trafalgar-square, London, May 1835. Civil Engineer.

1630. Is it not a great object to complete the Kingstown Harbour to the Government wharf now in progress of being finished on the Kingstown Harbour?—I conceive it of great consequence.

1631. And of great public interest?—Yes.

1632. What is the reason of that not being carried into effect?—In consequence of the objections of the Admiralty.

1633. Is it your opinion that those objections are well founded?—I have considered the subject, and I think there is no reason to apprehend any real damage will accrue at all.

1634. What is the difference of expense between the line projected by the railway company, and that which the Admiralty required them to make?—Several thousand pounds.

1635. What is the supposed advantage which the Admiralty will derive from the plan they propose?—They conceive the inner harbour will not be so smooth if the railway is carried over as intended, and they propose that it should be run across on arches, and in addition that a compensation harbour should be made of the same size as the small segment cut off from the old harbour: the execution of this would involve a further sum of several thousands; making the extra cost to the railway company for crossing the bottom of the small shallow bay, which is dry at half-tide, and only fit for very small vessels at high water, in the very highest degree expensive.

1636. Can you give any idea of the system pursued by the government of the United States of America, in carrying on their public works?—I can.

1637. State it?—The general practice is, that for all objects of public utility which may extend through more than one state (that part of America being divided into a great number) the officers of the government corps of engineers make the surveys at the expense of the government, with the view of laying out the projects to advantage and in a proper manner; and each state encourages those undertakings which pass through them, by taking shares or issuing debentures, or otherwise participating in the profit and loss of the undertaking, as private capitalists.

1638. And have not very considerable works been executed in that manner, and attended with considerable profit?—Yes; one work is, the celebrated Erie Canal, which was executed altogether at the expense of the State of New York. I believe this to be the only instance in which the entire work was executed exclusively by the state government. The returns from this canal have been exceedingly profitable.

1639. Then the government has derived that profit?—The government has derived the profit, it being entirely a government undertaking.

1640. The profit was from the tolls?—Yes; at this present time engineers are employed by the government of the State of New York in making surveys for a proposed line of railway, from New York westward, to the same extent as the canal.

1641. At the expense of the state?—The survey is making at the expense of the state.

1642. Who is to be at the expense?—The state government.

1643. Is the whole to be carried into effect by the contributions of government, or individuals?—By government participating largely in the concern.

1644. Is that usual in the other states?—Yes; in South Carolina a very extensive line of railway has been made, with four-fifths private capital and one-fifth government subscription.

1645. Is not the objection existing in America to the general government taking the management of public works, one more of a political than a financial nature?—Entirely political; the government do not consider that by the constitution of

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the United States they have a right to appropriate the public revenue to any but purposes essentially national; and in these, improvements of the interior of the respective states are not included; it is limited in this way, that any thing on the exterior coasts and boundaries of the country connected with the general defence or protection, is of that species of public works which the government ought to construct; but any thing of a different nature it is thought ought not to be made by government, but properly to fall within the duties of the respective states; but the general government have allowed the surveys to be made by the national corps of engineers.

1646. Do you think the principle of government giving large sums, without having any control, is a judicious principle in carrying into effect public works?—I think the government should be made participators in all great public works; the Committee are probably aware that France and some other continental states are about to do this; France has introduced a law, authorising the government to become proprietors and shareholders in the new railways projected in France, the surveys, levels and estimates whereof have already been made by the government engineers, and the expenses incidental to which were specially provided for by a vote from the French legislature.

1647. The public works in France are conducted, principally, by a general board at present?—Exclusively so, and their present system is not a good one; at all times the government insists on having the entire control and management of public works, which has hitherto greatly impeded the undertakings of private individuals.

1648. The public not contributing jointly with government, has produced considerable injury?—It has had the effect of arresting the progress of internal improvements in France.

1649. Do you not think the best arrangement is to have the contributions of government on the one side, and the public on the other?—Yes; and government, by affording pecuniary aid to associations of private capitals, acquire a legitimate right to control the management of public works.

1650. You would allow individuals and companies an adequate control over their contributions?—Certainly; that principle is already established in Ireland; private companies have their works under their own management, and the Board of Public Works send their engineers to report to them if the works are going on properly.

1651. Are you acquainted with the state of harbours on the coast between Valentia and Galway, and if so, inform the Committee whether there are any safety harbours in that direction, and whether you consider such harbours important, in reference to the proposed railroad between Dublin and Valentia?—I am not acquainted with any harbours on the western coast of Ireland, from personal inspection; I can only answer from careful inspection of the coast maps. There cannot be any doubt that Valentia Harbour is the most superior of any on the western coast of Ireland for accommodation, shelter and facility of access and departure. If the wind is blowing direct west at one or other of the entrances, a vessel will be able to fetch out either on the north or south tack.

1652. Do you think it is of importance to have safety harbours between Galway and Valentia with reference to the work proposed, the railway between Dublin and Valentia?—I should say there is not any occasion for safety harbours, as connected with the railroad, because the mouth of the Shannon and Bantry Bay afford places of refuge for vessels to the north and south of Valentia.

1653. Are you aware that there is a large tract of land between Hoop Head, the coast of Clare-side, and Galway, without any asylum for vessels of any kind?—I am aware of that.

1654. Do you not think that it would be a most desirable object to have some asylum harbours there?—No doubt about it.

1655. Ought not those harbours to be made at the public expense?—No doubt; all safety harbours should be made at the public expense. I beg to mention (though not connected with this part of the subject) that upon the Dublin and Kingstown railway the levels and ranges of the railway bars, in the adjustment of which it was generally considered Englishmen must be employed, are already kept in order by the native labourers. The Englishmen at first employed have all returned home, as, in the space of six months, the Irishmen learned the art of keeping the railway in proper level.

1656. Do you find them quick in learning the duties imposed upon them?—Very

Very much so indeed; you have only to mix a certain proportion of English to teach and show them. There was not more than one or two Englishmen in a hundred labourers employed on the Dublin and Kingstown railway.

1657. Were they generally workmen in the neighbourhood of Dublin, or taken indiscriminately from all parts of the country?—They came from all parts of the country. Very many of them were stone-cutters and labouring people about Kingstown, but a great number came from distant parts; some of the same men are now working on the Ulster Canal.

1658. Did you find them well-conducted?—Exceedingly well-behaved.

1659. Was there any degree of intemperance or dissipation after their money was received?—No, we always paid them in money; and it is a well-known fact, that the local consumption and sale of whiskey was much less while the work was going on than previously.

1660. At the period the work was concluded, was there any degree of drunkenness or dissipation among the people?—No, they went off gradually.

1661. You did not discover any injury arising to the habits of the people when they were taken from the railroad?—No, quite the contrary.

1662. Do you consider the proportions mentioned by Mr. Pim and Mr. Cubitt which private capitalists and Government ought to contribute are the proper proportions?—I do; I have thought much upon the subject, and I think that the proportions stated by those Gentlemen would form an equitable arrangement, limiting the profits to 10*l.* per cent., and appropriating the surplus as a sinking fund for the future repayment of the grants.

1663. Do you think it would be more advisable to leave the Government completely at discretion, according to the importance and practicability of the work, as to paying the one-third of the expense of the survey?—I think the proper way is for private individuals to make the survey themselves in the first instance, and that that should be submitted to Government, and re-examined by the Government engineers at the expense of Government; that is carrying only into effect the principle that would exist in the management of the works when in execution.

1664. Private individuals pay for the Board of Works' survey at present?—They do.

1665. Do you think that just and expedient?—No; on the contrary, where the assistance of Government is so much wanted as in Ireland, I think it is highly inexpedient that individuals should be saddled with the whole of the expense.

1666. Would you charge them exclusively with the expense of the first survey, and the second survey to be at the expense of the Government?—I would.

1667. Do you not think, where Government advances the whole of the money required for the work, that the execution should be entirely entrusted to the care of their officers?—No doubt.

1668. Would you extend that principle to any case in which a grant of one-half is made, as is done in the case of grants to Grand Juries?—I think the better way would be that the whole work should be under the supervision of the engineer of the Company, and the controlling power should be in the hands of the Government; that the expenditure should be made by the directors and officers of the Company, and checked by the officers of Government.

1669. Do you mean that when Government gives one-half?—Yes, the Government engineer can always have the opportunity of controlling what is going on without interfering with the details of the work.

1670. Are you at present aware that the Board making a grant of one-half takes the entire control?—Yes, that is quite right; where they give one-half and the other half is levied on the county, in that case the Government ought to become the sole controllers of the work; but where there has been money lent by Government, or money raised by assessment, and the other half is raised by subscriptions from individuals, I would draw the distinction. There are three cases that may arise; first, the grant to Grand Juries, in which money is laid out under the superintendence of the county engineer, that is, expended by the county engineer, controlled by the engineer of the Board of Public Works. The next case, where Government lends the whole of the money, they ought to take a still greater control than if they had lent only a portion of it, and they would, and, I believe, do, not allow any portion of the work to be done without the continual inspection of their own officers. The third

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third case is where the Government lends a portion, and the capitalists find the rest; then the private capitalists should have the affairs managed by their own officers, but to be controlled by the Board of Works, who would appoint engineers in different parts of the country, as the works require it.

1671. Do you consider the line of railway between Kingstown and Valentia to be the best line of railway for the purposes which you have already stated?—The general line of direction is.

1672. Will you mark upon a map the main-trunk line, and the off branches, or the different lines which would join the main line of the railway?—I will furnish such a map by the next meeting of the Committee.

Mercurii, 27° die Maii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Mr. *William Stanley*, called in; and Examined.

Mr. *W. Stanley.*

27 May 1835.

1673. OF what profession are you, Mr. Stanley?—I am employed as an officer of a Government department in Dublin.

1674. Have you turned your attention to the state and condition of Ireland?—Yes, for a considerable time.

1675. Is she in an improved condition, or has she improved?—There is a partial improvement in some of the western districts, but it is limited to a few localities, and is a fair indication of what the whole country may be made. I cannot, however, offer it as a proof of advancement in the condition of the country at large. I am convinced that the condition of the larger part of Ireland is deteriorated. There have elapsed but a few years since that great change took place in the British manufacturing system, which stopped in Ireland one of her principal sources of employment, the hand-spinning of linen yarn in the midland, western and northern districts.

1676. Is that trade lost to Ireland?—The hand-spinning is entirely excluded; but the spinning of linen yarn is not lost to Ireland, because machinery is now erected for the purpose, like that which existed previously in England, and first diminished the Irish hand-spinning. Besides, we cannot consider a country improving which is now almost wholly agricultural, and which is affected by the same circumstances that depress agriculture in England. If the agricultural occupiers in England are unable to pay their rents, the Irish occupiers must be more distressed, their prices being lower and their rents being higher than they are in this country.

1677. When you say that the rents are more moderate in England, do you speak with reference to the actual amount which is derived by the tenant for his share of the produce?—I think the Irish occupying tenant derives less from the produce of the soil than the English occupying tenant.

1678. Are you aware of the difference of the acre?—Yes; I am aware that 30*s.* for an English acre would be about 2*l.* 8*s.* for an Irish acre. When I say that the Irish tenant derives less from the produce of the soil than the English tenant, I should add, that his rent may not be too high for such land as he occupies, but too high for a person in the condition of an Irish occupier. I know many occupiers of land in Ireland who in other circumstances would not consider their rents too high, even with present prices. If a farmer be liable to rent for 50 acres of land, and be capable of cultivating only 30, which is a very general condition in Ireland, it is obvious that he is paying, in reference to his productive land, a much higher rent than the farmer who makes every acre productive. The English farmer appears to be a more comfortable man and in better circumstances than the Irish farmer. I do not say that he pays less in proportion to the real value of the land than the Irish farmer, but that the Irish occupier, with reference to his own circumstances, is under too much rent.

1679. Supposing the skill and the capital of the Irish farmer to be equal to the English farmer's, you would not consider the rent paid by him at present as *comparatively*

ratively high, with reference to the average rent of land in Ireland?—I would not, with reference to ordinary farms.

1680. Have you formed any estimate of what the actual average rent of an acre of land in England is in the cultivated portion of the kingdom?—I have not; I only judge of the rent in England by the apparent condition of the farmers, notwithstanding their wages and taxes. I have not seen any estimate to enable me to state the average you speak of.

1681. Are you not aware that Mr. Griffiths, who has entered into the calculation very minutely, has given an average rent payable in Ireland of not more than 12*s.* or 13*s.* by the English acre?—I have seen a number of averages of that kind, but I have seen nothing on data to satisfy me that they are quite accurate. I know the average value of land for the Grand Jury rates in Ireland is about 15*s.* for counties; but it is higher for land in "counties of towns." In the accounts published by the Board of Trade, there is one compiled from Returns obtained from the several Grand Juries in Ireland, in which the average value for assessment is 15*s.* an acre. Sometimes a county gives us 18*s.* and sometimes 12*s.*, but I think the average is 15*s.*; and when the Grand Juries applot upon such a valuation, we must suppose that the actual average rent is a great deal higher.

1682. Are you aware of any measures having been taken to correct the evils to which you have alluded as proceeding from the change of system with respect to manufactures?—I am not aware that there has; indeed I know there has not.

1683. Can you suggest to the Committee any measures that might be usefully adopted for that purpose?—Yes; I think in the very tracts in which a great deal of distress exists, measures might be adopted to employ (not the females who once lived by spinning,) but their husbands and sons, and thereby better the condition of the families who have been impoverished in the way I have referred to. A large portion of the linen yarn for exportation, and for the great linen trade of Drogheda, was obtained from the counties near the Shannon; from Roscommon, Westmeath, Longford and Cavan; and near these very districts lie extensive sources of employment not yet developed.

1684. What measures would you take for the purpose of employing the poor?—Referring to the whole of Ireland, the most direct measure to employ the poor would be one that would check the pasture system, and compel the occupiers of large tracts of land to employ labourers in tillage, by breaking up a certain portion of the land. I think that could be done by imposing a labour-rate upon all lands, and exempting from it all persons who would give employment to a certain extent; but I would not directly enact that every occupier of a certain quantity of land should employ a given number of persons. I would leave it optional to give employment, or pay a certain moderate rate for enabling public Commissioners to provide employment for the poor. At the same time I would not put that rate upon lands, where it would be impossible for the occupier to give employment; for instance, there are lands along rivers, that are liable to be flooded, which cannot be well broken up; but all lands not liable to those casualties I would make liable.

1685. Would there not be insuperable difficulties in carrying such a law into effect?—I think not; I would carry it into effect, under the control and management of the Board of Works in Dublin, assisted by local Boards elected from among the rate-payers; for which purpose all the rate-payers should be formed into district constituencies.

1686. Would you leave to that Board the discretion of determining what number of labourers ought to be employed on the different descriptions of lands?—There are some lands, I would say, ought not to pay at all, and these should be specifically exempt, but I would leave it to the discretion of the Boards to apply the exemption, by deciding what lands should be deemed to be within the scope of the exemption. With reference to the quality of soils, there could be no difficulty in fixing for all occupiers a liability of providing employment for the same number of labourers on equal quantities of land, if we limit the number with reference to the labour requisite for good land, because inferior soils require more labour to keep them productive than good land requires, and therefore the poor soils would not be surcharged with labour.

1687. Does the state of society in Ireland afford materials for such a Board or such a constituency?—I think it does; it affords materials for managing all Grand Jury concerns; therefore I think it must afford materials for managing this. I think

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a very inferior class of men to the gentlemen on Grand Juries would be sufficient for this purpose.

1688. Would not the interests of the constituency and this Board clash with the interests of the landlord in that respect?—Landlords would be rate-payers when resident, being occupiers of land, and I do not think the rate would clash with their interests; for whatever improves the country must serve the landlords. The local Commissioners referred to, should be elected for baronies annually or triennially; and if none but the principal rate-payers were qualified, the Boards would consist of the respectable gentry, farmers and traders, and be the most competent bodies for the management of all public affairs connected with local taxation in both rural and town districts. In 1830 Lord Cloncurry proposed to transfer to such bodies the collection and management of a general tax on lands, houses and rents, for all local purposes of a public nature, in lieu of Grand Jury cess, turnpike tolls and town rates; and in 1834 his Lordship published the outline of a law for effecting that object, in which it was proposed that the control and interference of Irish Grand Juries and corporations, in the levying and application of local taxes and tolls, should be superseded by local elective bodies, acting under the control of the Board of Works in Dublin. It was also proposed that the labour-rate I have suggested should be managed by them. I may add that my suggestion is supported by a proposition which Primate Boulter made in 1727, when one of the Lords Justices of Ireland, that every occupier of one hundred acres of land should keep five in tillage. And Spenser in his time proposed that every person who kept twenty kine should keep a plough going. My proposition, if adopted, would introduce a system of husbandry which, of itself, would in time compel the employment of even a greater number of labourers than ten for every hundred acres; I allude to green-crop husbandry. That might also be promoted by giving premiums or bounties to cultivators of green crops for feeding cattle.

1689. In the absence of such a law, would not great benefit be derived to the poor of the country by the judicious expenditure of money upon public works, such as making roads and bridges, and improving the internal navigation of the country?—I think that next to such an assessment as I speak of, which would create employment generally, I would say that the outlay of money on public works would be the most politic expedient.

1690. Is not such expenditure required more in some parts of the country than others?—I think it is more required in the pasture districts than the tillage districts; and I think those districts possess the means of supplying a sufficient number of labourers for the works without interfering with the general occupations of farms. If you commence public works in a great tillage district, it might interfere with the farmers in that district by raising the rate of wages against them, in spring and autumn, which under present circumstances would throw them back. I have compiled a statement from various Returns published by the Board of Trade, which shows the number of Irish agricultural labourers and labouring occupiers in 1831 in each county, as compared with the number of acres. From this it appears that the peasantry and lands in the pasture districts are in nearly the same proportions as in the tillage districts; therefore, in the pasture districts there must be a great number unemployed at those periods of the year in which they are not working in England.

1691. Will you hand in that document?—

[*The following Document was handed in.*]

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LAND in each MUNICIPAL DIVISION of *Ireland*; Number of Agricultural Labourers in 1831; Occupiers in 1831, labouring for themselves and not employing Labourers; Total Agricultural Labourers and Labouring Occupiers in 1831; Number of Males, aged Twenty Years or upwards, in 1831; and Rate of Increase of Population from 1821 to 1831, as in the Official Tables of the Board of Trade, Part 2, page 119, and Part 3, pages 443 and 447.

	Cultivated Land.	Mountain and Bog.	Agricultural Labourers in 1831.	Occupiers of Land in 1831, labouring for themselves without employing Labourers.	TOTAL Agricultural Labourers, and Labouring Occupiers, in 1831.	MALES aged 20 Years or upwards in 1831.	Rate of Increase per Cent. of the whole Population from 1821 to 1831.
	Statute Acres.	*Statute Acres.*					
ANTRIM	466,564	225,970	13,152	18,098	31,250	73,586	17
Carrickfergus	16,542	- -	346	331	677	1,910	8
Armagh	267,317	42,472	14,730	15,728	30,458	52,392	11
Carlow	196,833	23,030	6,613	5,694	12,307	19,845	3
Cavan	421,462	30,000	13,913	21,486	35,399	53,580	16
Clare	524,113	259,584	22,208	24,394	46,602	63,077	24
Cork	1,024,340	700,760	75,251	35,613	110,864	171,873	10
—— City	44,463	- -	2,436	668	3,104	24,733	6
Donegal	520,736	644,371	13,330	34,836	48,166	68,851	20
Downe	502,677	108,569	19,048	20,483	39,531	82,999	8
Dublin	229,292	10,812	12,967	1,936	14,903	43,120	18
—— City	8,527	- -	508	26	534	50,234	9
Fermanagh	320,599	101,952	7,881	16,984	24,865	35,568	14
Galway	945,212	464,957	21,043	49,883	70,926	94,096	23
—— Town	10,501	12,000	1,709	1,622	3,331	7,983	19
Kerry	581,189	552,862	26,116	15,719	41,835	63,545	18
Kildare	325,988	66,447	14,107	3,208	17,315	27,625	9
Kilkenny	394,830	96,569	16,893	10,372	27,265	41,653	6
—— City	22,287	- -	1,394	288	1,682	5,516	2
King's County	394,569	133,349	11,727	11,535	23,262	34,663	9
Leitrim	266,640	128,167	6,203	18,639	24,842	32,017	12
Limerick	548,640	91,981	30,765	12,843	43,608	61,658	12
—— City	34,162	- -	2,561	1,289	3,850	15,663	12
Londonderry	372,667	136,038	14,717	15,530	30,247	52,367	14
Longford	192,506	55,247	11,309	8,228	19,537	25,459	4
Louth	185,568	14,916	8,605	6,063	14,668	26,171	7
Drogheda	5,777	- -	431	84	515	4,222	decrease of 4 per cent.
Mayo	871,984	425,124	17,238	50,219	67,457	86,782	24
Meath	561,527	5,600	23,045	6,894	29,939	44,204	10
Monaghan	309,968	9,236	10,631	17,232	27,863	45,669	11
Queen's County	335,838	60,972	12,412	9,594	22,006	35,717	8
Roscommon	453,555	131,063	17,925	25,848	43,773	57,406	19
Sligo	257,217	168,711	7,764	20,889	28,653	40,849	17
Tipperary	819,698	182,147	36,440	23,181	59,621	98,243	16
Tyrone	550,820	171,314	13,047	28,379	41,426	73,557	16
Waterford	343,564	118,034	16,264	6,498	22,762	36,988	15
—— City	9,683	- -	306	63	369	6,420	nil.
Westmeath	313,935	55,982	14,766	7,142	21,908	32,815	6
Wexford	545,979	18,500	15,321	10,683	26,004	45,414	7
Wicklow	400,704	94,000	11,319	6,072	17,391	29,295	9
TOTALS	14,603,473	5,340,736	567,441	564,274	1,131,715	1,867,765	—

Note 1.—Number of Acres of *reclaimed* Land for *each* Labourer and Labouring Occupier not an employer, 13.
Number of Acres of all kind of Land for *each male* in Ireland, in 1831, aged 20 years or upwards, 10½.

Note 2.—If each of the 1,131,715 Labourers and Labouring Occupiers were, by an improvement of condition, able to consume 1 lb. of flour in the day, the *Irish* consumption of wheat in the year would be increased by upwards of half a million of quarters, as much as is now exported; and if they consumed 1 lb. of beef or mutton in the day, their consumption in the year (deducting 65 days of abstinence) would amount to more than three million cwt., which, if in beef, would require 336,819 cattle, weighing nine cwt. each.

The Irish Cattle exported to England in 1832 numbered - - 69,624 to Liverpool.
7,334 to Bristol.

TOTAL - - - 76,958

being little more than a fifth of the number which the peasantry would require if properly dieted.

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1692. Is the state of the peasantry in the pasture districts much worse than in the tillage districts of Ireland?—Much worse. I am acquainted with several of those districts. In the county of Louth, which is a tillage district, the peasantry appear superior in their condition to the peasantry in Mayo, Leitrim and Roscommon; so are the peasantry in Down, Wexford, and in all the tillage districts. In Kildare they are not in good condition; it is chiefly a pasture district where the lands are good, but tillage where the lands are bad.

1693. What becomes of the peasantry who have not sufficient employment in those pasture districts?—They seek for employment elsewhere; I have seen them in the North of Ireland, in the county of Meath, and in England, in large numbers.

1694. Do you speak of a recent period, when you speak of the county of Mayo; have you been there lately?—I was in Mayo in 1830.

1695. Have you any idea of the size of the farms in the county of Down?—I have not an idea of the size of the farms in the county of Down; I speak generally of the appearance of the people as I travelled through it.

1696. Are you not aware that the county is divided into small farms, and that the persons who own these farms are generally weavers?—I am aware that the linen manufacture was carried on partially in that way in the county of Down, and is still carried on in the vicinity of some of its towns; but the system alluded to was not so much carried on in Down, as in the counties of Armagh, Tyrone and Monaghan; that system is, in a great measure, broken up, and the weavers are in or near the towns; Down is more a bleaching district than a weaving district.

1697. Has not the migration of labourers to England very serious effects on the poor-rates in England, and the price of labour?—Yes; whatever has the effect of depreciating labour in England, and lowering wages, must have an injurious effect on the poor-rates.

1698. If the peasantry in Ireland had employment afforded them, this migration would be prevented?—Undoubtedly it would; almost all the labourers who migrate from Ireland are from the western districts, and not from the districts along the Channel, because in the latter districts labourers are employed throughout the whole year in tillage.

1699. Can you state what is the food of the peasantry of Ireland in those western districts?—Principally potatoes; persons there who own considerable tracts of land, and diet their labourers, give them nothing but potatoes; they give the potatoes three times a day. Peasants who provide their own diet, or hire potato ground for their own use, are frequently unable to have potatoes three times a day.

1700. Do they not have milk?—Yes, men dieted by farmers; but they do not get milk regularly at home, unless they are fixed farm labourers, and have an allowance of milk.

1701. What is the rate of wages per day of those peasantry?—The farmers in Mayo pay sometimes 8*d.*, and sometimes 6*d.*; but it is difficult to ascertain the rate of wages, because there may be something given besides, or there is a deduction made for cabin rent, which leaves the labourer a very scanty allowance for his maintenance.

1702. What do you say is the general average of the price of labour in Ireland?—Near the eastern towns 10*d.* is given; but throughout the country 8*d.*, I think, is the average.

1703. Are you aware that a celebrated Writer, travelling over Ireland, came to the conclusion that the general average was 4*d.*?—I am only speaking of the days on which they are employed; for these days, I know in some counties the labourers are paid 10*d.* a day, without victuals, and in others they are paid 8*d.*, and sometimes 6*d.*

1704. For how many days?—Some labourers are employed throughout the year at those rates; in some counties 10*d.*, and in others 8*d.* a day, would be necessary to secure good labourers for the whole year, so as to have their services at all periods. If that agreement were not made with them, they would have to get more in spring and autumn. I know there are many peasants in those districts who are, at various periods of the year, subsisting on the charity of the men employed, and whose children are obliged to go about picking up fire-wood through the country.

1705. Are you not aware that there are many districts in Ireland in which the labourers do not receive 6*d.* a day for many months throughout the year?—I am aware that even in the neighbourhood of Drogheda, surrounded by fine tillage lands, you

you will get good labourers frequently at 6*d.* a day, and they are glad to get it, but these are not fixed labourers.

1706. You are, then, prepared to say that there is a great want of employment for the poor in Ireland, and that they are not sufficiently remunerated for their labours?—I am quite prepared to say so.

1707. Why is it that the lands in Ireland are not more generally tilled, but that a preference is given to the pasture system?—It has been the habit of the country; that is one reason; and gentlemen in general prefer to have the lands in pasture than to have them under tillage. I do not suppose that pasture can be more profitable, for we learn, from the feeding system adopted on the Earl of Gosford's estate, that the pasture system is not so profitable as the tillage; that the culture of green crops, to feed cattle in yards, supports a greater number of cattle than the same number of acres under grass would support; that is demonstrated by actual experience.

1708. Is there not a large importation of manufactures from England into Ireland?—Yes.

1709. How is that paid for?—Out of the balance of trade; there is a balance of money always due from England to Ireland, and the money which the English importers of corn owe to Ireland, is paid partly to the persons who send over manufactures, and partly goes into the hands of stock-brokers and money-dealers, to supply the medium of remittance to land agents, and others, requiring to pay money in England.

1710. England is obliged to import corn largely every year for her support?—Yes, largely every year; she imports one portion of that from Ireland, and the other from foreign countries.

1711. How does she pay for that part which she imports from Ireland?—It is paid for with English money in the first instance, and that English money returns back again to England; firstly, for manufactures, and secondly, for landlords and creditors, and also on account of assurance and other companies having agents in Ireland; in fine, for all purposes, whenever Ireland owes money to England.

1712. Then for the wheat she imports into this country, she sends an equivalent in manufactures to Ireland?—Not nearly an equivalent; because there is always a difference, part of which goes to the absentee landlords.

1713. How is the corn paid for by England which she imports from foreign countries?—It is paid for chiefly in gold.

1714. Does she not export manufactures?—Yes; but not sufficient to provide for in bills or cash for a large supply of corn, in addition to other imports. I will refer to the best evidence upon that subject, the testimony of Mr. Rothschild. He stated in evidence before the Bank Charter Committee, in 1832, that "the exchanges will always be favourable to England in time of peace, when there *is no importation of corn*, and no loans for foreign sovereigns negociated. If you send goods, they go out regularly, and the money returns regularly. *If you want corn*, it is all imported at once, and the bills become payable all at once, *and the exchange is turned by the loss of gold sent out to meet those bills.*"

1715. Have you any other suggestion which you wish to offer to the Committee?—There is one suggestion, which is, that if money were required to carry on Public Works (in addition to Parliamentary grants,) to afford employment to the poor, it could be obtained by empowering the Board of Works to take subscriptions for loans. Let these be taken for the Board at the public banks, and let every person who lends money receive debentures from the Board, with an undertaking for the payment of principal and interest, without reference to casualties. If the interest, so secured, were to be four per cent. the Board would get a great deal of that Irish money which is now vested every year in English securities, and it would then become a fund of Irish capital used in aid of Irish industry. Since 1824, when power was given by law of transferring English stock to Ireland, there has been vested in the public funds, Irish capital amounting to 16 millions; and this includes, of course, a portion of the money of the Irish savings banks. If loans be sought with any liability of risk, you will not get them, but if the law will guarantee the payment of the interest, you will get abundance of money; and if it was laid out upon works, for which rates or tolls would be imposed, there would be no risk, the Boards of Works having power to secure the collection of the taxes.

1716. Is there any other document you wish to put in?—With reference to the question as to the exportation of corn from Ireland to England, I present an account of the quantity of corn imported into England from Ireland, and from

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foreign countries, since 1814. It shows that in one year of the period, Ireland did not send in any wheat to England, which goes to prove that the quantity sent every other year is the surplus which the people were not able to buy. It also shows that Ireland, in supplying the English market with food, competes rather with foreigners than with the English farmers, the latter not having sufficient for the market.

[*The Witness handed in the annexed Document:*]

CORN and MEAL brought into GREAT BRITAIN *for Consumption*,—as in the Official Tables of the Board of Trade, Part 3, page 396; showing the Import Duty since 1822.

	FOREIGN AND COLONIAL		IRISH		Wheat and Flour sent to Ireland from Great Britain.
	Wheat and Flour.	Oats, &c.	Wheat and Flour.	Oats, &c.	
	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
1815 - -	nil.	523	189,544	631,648	329
1816 - -	225,263	101,471	121,631	752,234	11,978
1817 - -	1,020,949	756,757	* 59,025	640,784	81,409
1818 - -	1,593,518	1,945,050	108,230	1,099,621	7,592
1819 - -	122,133	1,131,274	154,031	813,830	2,936
1820 - -	34,274	726,851	404,747	1,013,373	264
1821 - -	2	2	569,700	1,253,116	3,696
1822 - -	nil.	nil.	463,004	600,085	4,340
1823 - -	12,137	nil.	400,068	1,128,085	15,781
1824 - -	15,777	659,852	356,408	1,277,616	3,737
1825 - -	525,231	304,994	396,018	1,807,944	2,681
1826 -	315,892	1,781,212	314,851	1,377,338	Account discontinued.
1827 -	572,733	2,413,822	405,255	1,424,488	
1828 - -	842,050	374,937	652,584	2,173,551	
1829 - -	1,364,220	579,829	519,493	1,786,313	
1830 - -	1,701,885	1,039,291	529,717	1,683,012	
1831 - -	1,491,631	1,077,352	557,520	1,862,123	
1832 - -	325,435	97,794	572,586	2,033,148	
1833† -	82,346	26,268	844,201	1,892,080	

	IMPORT DUTIES ON FOREIGN WHEAT AND FLOUR Consumed in GREAT BRITAIN.		Average Price of WHEAT in England.
	Per Quarter.	*Amount.*	*Per Quarter.*
	s. d.	£.	*s. d.*
1823 - - -	16/11¾	10,310	51/9
1824 - - -	11/11½	9,449	62/
1825 - - -	8/6¾	225,329	66/6
1826 - - -	11/3¾	178,995	56/11
1827 - - -	21/4¼	611,817	56/9
1828 - - -	1/9¼	75,222	60/5
1829 - - -	9/2¾	630,918	66/3
1830 - - -	6/4½	543,869	64/3
1831 - - -	4/8	348,138	66/
1832 - - -	16/2	263,097	58/8
1833 - - -	5/6	22,748	52/11

* *Note.*—Wheat sold in England in 1817 at an average price of 94*s.* the imperial quarter, being 18*s.* over the price of 1816, and 9*s.* over the price of 1818.

There was, in 1817, an increase in the exportation of Linen, and a very largely increased exportation of Cotton Manufactures. The real Trade Balance of the year in favour of Ireland, was £.4,250,132.

† *Note.*—In 1834 the Foreign and Colonial Wheat and Flour *brought into consumption*, amounted to 88,661 quarters, and all other kinds of Grain and Meal amounted to 169,040 quarters; and the Irish Wheat and Flour imported, amounted to 779,504 quarters, and all other kinds to 1,692,305 quarters.

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If you can get Ireland improved, she may send you as much food as at present (but this you want,) and she will raise a larger supply for the use of her employed peasantry. I beg to refer to the computations on the two Statements which I have compiled for the Committee.

Mr. *W. Stanley.*

27 May 1835.

A STATEMENT of the AMOUNT of GOVERNMENT STOCK, bought for IRELAND in LONDON, and transferred to Ireland, from 1821 inclusive to the close of 1834; also of Government Stock bought in Ireland with *Irish* Money, and transferred to London, in the same Period, according to the Official Accounts published by the Board of Trade, Part 3, page 325, and to the Finance Accounts of 1834, published for Parliament, page 96.

	Transferred to Ireland.	Transferred from Ireland.
1821	£.83,103 14 8	£.9,694 2 5
1822	1,517,735 17 –	17,232 7 9
1823	809,030 7 2	—
1824	2,172,981 – 7	27,672 3 7
1825	3,536,888 15 6	254,323 5 8
1826	1,672,643 1 8	839,276 7 1
1827	524,186 4 7	1,999,234 19 9
1828	1,364,030 13 11	756,452 13 2
1829	1,151,808 9 8	758,122 2 9
1830	2,065,219 3 5	1,373,032 18 –
1831	1,311,718 8 6	515,646 9 8
1832	811,601 11 1	511,176 4 11
1833	607,391 2 2	1,059,365 16 2
1834	561,691 7 –	1,400,951 17 2
TOTAL	£.18,190,029 16 11	£.9,522,181 8 1

It is obvious to all who know that Ireland is a *remitting* country, that the stock bought for her in London and transferred to her accounts, must have been bought, either directly or indirectly, with *Irish* money; for, supposing that Government used *some* as a medium of remittance to its Irish functionaries, and *possibly* it did, still the stock must have been sold in Ireland for *Irish* money, to make the remittance available. The Total, then, of the first column represents *additional* Irish capital vested in the Funds. The Total of the second column also represents Irish money; for whether the stock was bought for Government, landlords living in England, or by agents of English companies, it was still bought in Ireland, *and not with money remitted from England,* although not all perhaps with money of the nature of capital.

George Poulett Scrope, Esq, a Member of the Committee; Examined.

1717. HAVE you any suggestion to make to the Committee?—I think that in case Parliament should place any further large grants of public money at the disposal of the Board of Works, to be expended in making new lines of road across wild and partly uncultivated countries, it is desirable that the grant should be accompanied by the following conditions, viz.:—

G. P. Scrope, Esq M. P.

That a certain portion of every tract of waste land across which a new road shall be made by the Board be appropriated as Crown property, with the view of its being divided into lots of a limited size, and either sold in fee or leased out for long terms at moderate rents, on condition of their improvement and undivided occupation.

For this purpose I should suggest that the waste land on one entire side of the new road should be set apart to a fixed depth (say of half a mile) where the waste extended back so far; where the waste does not reach so far, the Crown allotment would of course stop at its confines.

The experience of all agricultural countries in both hemispheres has proved that it is only from occupants possessing a durable or permanent interest in the soil that a spirited or effective system of improvement can be expected; and the class of occupants who would be admitted by the Crown to these lots of land would be likely to afford a very valuable example to the tenants admitted by the land-owners to settle on the other side of the road, and indeed to the surrounding country.

By such an arrangement the peasantry of the country will be secured in a due participation in the benefits expected from the proposed expenditure of the public money; whereas if the whole of the waste land whose improvement is facilitated by the new lines of road remain unconditionally in the power of its present owners, they will be enabled almost wholly to monopolize the benefit of the improvement, by exacting high rents for the occupation of any parts of the improvable waste, as appears from the evidence of Colonel Burgoyne to be the practice at present.

G. P. Scrope, Esq. M. P.

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The present owners of these waste lands will have no reason to complain of a part of their property (hitherto of little or no value to them) being taken as a consideration for the expenditure of large sums of public money in improving and conferring a very considerable value on the remainder.

Indeed the proposition might, if necessary, be supported on higher grounds, namely, on the principle that waste lands ought to be considered the property of the state in trust for the people, or at all events should be appropriated by the state (compensating the legal owners to the full actual value of their interest) whenever they are found to be injuriously locked up from improvement in private hands, and that the increasing numbers, and unemployed and wretched condition of the labouring population of the state, attest that an enlargement is needed of the field for the development of their industry. The principle that the waste lands of every country are the property of the state or its Sovereign, to be dealt out by him among his subjects for the purpose of its improvement and its cultivation, is the original basis of the legal right to land-ownership in every country, and is still the express law in many of the largest agricultural districts of the globe, particularly in the East. The Americas, North and South, have recognized and established it as the foundation of their law of property in land. We have done the same in all our colonies. It is highly desirable that it should be re-introduced in a modified form into our legislation respecting land in this Island and Ireland; for, wherever liberal encouragement has been afforded by the state to the cultivation of waste land, by securing a more or less permanent interest in the soil to those who will expend their labour and capital in its improvement, there agricultural industry and agricultural capital have proportionately enlarged and extended themselves. The economical circumstances of the mass of every people are perhaps more extensively influenced by the more or less complete adoption of this principle than by any other that can be mentioned within the range of political or economical science.

I add another suggestion, namely, that a condition should be annexed to every grant or loan, upon favourable terms, to be made to private individuals or public bodies by the Board of Works, for purposes of improvement, viz. that all the labour employed be paid for in ready money.

Veneris, 29° die Maii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Thomas Charles Harrison, Esquire, called in; and Examined.

T. C. Harrison, Esq.

29 May 1835.

1718. WHAT office do you hold?—Secretary to the Commission of Excise Inquiry; Sir Henry Parnell's Commission.

1719. Were you Secretary to the Commission of Revenue Inquiry?—I was.

1720. Was there not evidence given before that commission respecting the western harbours of Ireland?—There was. I ought to state that that evidence was generally on the subject of the Post-office communications with the British North American colonies, and the subject of the western harbours of Ireland was an important incidental point connected with it.

1721. Can you furnish the Committee with the evidence so delivered?—It was laid before Parliament, and printed under the title of Western Harbours, Ireland, last Session. (*See* No. 592, Parliamentary Papers, 1834.)

1722. What is that paper you have in your hand?—It is in substance the same paper with that which the Committee has ordered to be laid before it.

1723. Did you address a letter to Mr. Spring Rice respecting the western harbours of Ireland?—I did so in the month of August 1832; I was so much impressed with the importance of the general subject, particularly with reference to Ireland, that, assuming it was probable that the evidence (which I considered very valuable) which the Commissioners of Revenue Inquiry had taken might remain unnoticed, and that evidence being still at that time in my custody, as late secretary to that commission, I felt it my duty to draw up a statement bringing forward all the principal points contained in the evidence in question, which I addressed, not in the shape of a letter, but as a statement or memorandum for the use and information of Mr. Rice and of His Majesty's Government.

1724. Can you furnish the Committee with that statement?—I am not able to furnish the Committee with a copy of that identical document, because that document does not appear to have been recorded as official at the Treasury, probably in consequence

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consequence of its having been drawn up as I have described, in the shape of a statement or memorandum; consequently, two months ago I felt it my duty again to submit the substance of that statement in the shape of an official letter to the Lords of the Treasury. The letter which I now produce is a copy of that to which I am referring, and is in substance precisely the same document as that which I submitted to Mr. Spring Rice in August 1832.

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1725. Does this paper contemplate the formation of a railway through Ireland to the harbour of Valentia?—My original statement of 1832 did not contemplate any railway; but it was the circumstance of having recently heard that such a project was in contemplation, which so strongly confirmed all the views I had myself taken of the subject upon public grounds; it was that circumstance that induced me to address this statement again to the Lords of the Treasury; knowing that it had not before been officially recorded, and that it was probable, therefore, it might have been altogether lost sight of.

1726. Be so good as to hand in that statement?—

[*The following Statement was then handed in:*]

Office of Excise Inquiry,
5, Whitehall Place, 28 March 1835.

My Lords,

HAVING only recently learnt that a very extensive project has been in agitation for establishing a grand steam communication by means of a railroad through the centre of Ireland, viz. from Dublin to Valentia harbour, on the south-west coast of Ireland, with branch railroads to the principal towns on either side of the main road, and being deeply impressed with the conviction that extensive benefits must accrue to Ireland by any measure which shall have the effect of attracting to that country a greatly increased inland intercourse, with all its concomitant advantages of increased diffusion of capital and employment and comfort, especially amongst the poor and industrious classes, I feel it to be my duty to submit to your Lordships the following observations, which are in accordance with a memorandum which I submitted to the Treasury in the month of August 1832, upon the subject of establishing a steam-packet communication between the south-west coast of Ireland and the British North American possessions, but which memorandum, I have reason to believe, has never been recorded or considered in the light of an official document, and consequently may not be in the possession of your Lordships. It is right I should premise, that the papers upon which these observations were founded consisted of a series of examinations, containing much valuable and interesting information, which had been taken by the late Parliamentary Commissioners of Revenue Inquiry in Cannon Row, and that these examinations were laid before Parliament in the last Session, and printed.

Parliamentaty Papers, 1834, No. 592.

The attention of the late Commissioners of Inquiry had, shortly prior to the termination of their functions, been directed to the management of the communications between this country and its various colonial possessions, as well as with foreign parts. The communications with the British North American possessions necessarily formed an important branch of this subject, to which also the attention of the commissioners was more particularly called by the fact which they had ascertained in the course of their investigations, that at present almost the whole of the correspondence of Great Britain with those possessions was conveyed by the American packets from Liverpool to New York, with a total loss to this country of the revenue of postage legally due upon such correspondence.

It also appeared that a very great proportion of the personal communications between this country and the possessions in question were effected by means of the same New York packets, and it was evidently a matter for serious consideration, whether some arrangements could not be adopted which should secure to the British packets that conveyance, both of correspondence and of passengers, which, under present arrangements, is almost entirely diverted from them, as well as to this country that amount of postage revenue which is now entirely lost to it, and which may be estimated to be very considerable.

So strongly, indeed, was the superiority of the communications with the British North American possessions, by means of the Liverpool and New York packets, over those which were accomplished by the packets from Falmouth, felt, that as long ago as in the year 1825 a project was set on foot for the establishment, by private subscription, of a steam-boat communication between the western coast of Ireland and Halifax, by means of which it was hoped that much of the dependence of this country upon the aid of foreign vessels would have been obviated.

This project was not, however, carried into effect, although it is stated that an American company was formed at Boston for the purpose of meeting the British steam-boat at Halifax, by which a considerable degree of American support would have been secured to it.

The circumstances were brought under the notice of the commissioners in a clear and perspicacious evidence given by the Knight of Kerry, in which also the question of selecting a fit and proper harbour on the western coast of Ireland as the port of departure for the British packets destined for the North American colonies, is fully discussed.

Evidence of the Knight of Kerry, 31 July 1829. Parl. Papers, No. 592, 1834. Page 24 to 39.

This question was felt to be one of much importance with a view to the accomplishment of the most rapid and punctual communications with the possessions in question, in which it is well known a great increase of wealth, population and property has of late years taken place, and the commissioners were enabled to obtain the evidence of the following individuals connected with some of those possessions who were ascertained at that time to be

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in London, viz. Sir Howard Douglas, Bart., late Governor of New Brunswick, Colonel Drury, Postmaster of ditto, Mr. Charles Fairbanks, a resident member of the Legislature of Halifax, Mr. Richard Smith, manager of the mines in Nova Scotia and Cape Breton, Mr. Busteed, chief clerk and registrar of the Supreme Court of Newfoundland, and Mr. Joseph Bates, a merchant of extensive intercourse with America.

The Commissioners further obtained much valuable information, illustrative of the different bearings of the subject, from Captain Beaufort, the hydrographer to the Admiralty, in an evidence given by him on the 20th May 1830.

Parl. Papers, 592, 1834. pages 1 to 24

Sir Howard Douglas stated, that for the first two years of his being at New Brunswick, he received his correspondence exclusively in the mail bags by the packets; but that latterly finding, from the frequency as well as regularity of the communications by the line of New York, he could get more immediate information from home, he had a good deal of his correspondence sent to him *viâ* New York, and very often got, between the period of the arrival of the packets, private letters of much later date. He further stated, that a very great and increasing proportion of the mercantile correspondence of persons residing in New Brunswick was received through New York, and that a very great portion of the commercial correspondence to London from Canada passed also through New York, and frequently, he believed, the Government despatches to Upper Canada likewise. Sir Howard Douglas further described the correspondence to St. Andrew's, in New Brunswick, to have latterly increased so considerably as to require a horse and waggon to carry it, and that a great part of his correspondence from England came by the way of New York and Boston; and as regards passengers, that a great many took the same course, with the view to saving time.

These circumstances Sir Howard Douglas attributed to the convenience arising out of the frequency and regularity of the opportunities of conveyance between New York and England; and he expressed his opinion, that if a regular, cheap, expeditious and frequent communication were established by steam with Halifax, there was no doubt that all the correspondence of Nova Scotia and Prince Edward's Island, and nearly the whole of that to New Brunswick, would be carried on through such a channel, and that so soon as confidence, the result of some successful trials, should have proved the practicability and safety of the conveyance, passengers to and from those Provinces would avail themselves of it, and also the passengers to and from the Canadas would seek that line in summer, if a good and frequent steam communication were established with Quebec.

Sir Howard expressed his opinion of the perfect practicability of the establishment of a steam communication, taking the probable duration of the voyage at 16 or 18 days, and the capability of a steam packet to carry the necessary quantity of fuel; and he further stated, that there are great quantities of coal in the British Provinces, Cape Breton and Picton, in Nova Scotia, and vast quantities in the province of New Brunswick; and he added, that the establishment of steam between America and England had excited very intense interest, and was looked to with very great solicitude in all the provinces.

With regard to the proposed port for departure and arrival from and to this country, Sir Howard expressed his opinion that there could be no doubt that a departure taken from the westwardmost part of the United Kingdom, by steam vessels either starting from or calling to replace their colonial stores at such port, would be greatly advantageous in all respects, inasmuch as the voyage from land to land would be thereby made the shortest possible, and increased space for freight and passengers would be thereby obtained, and that for these reasons the harbour of Valentia would be an important port for departure and arrival.

Parl. Papers, 592, 1834, pp. 44 to 51.

The evidence of Colonel Drury, the postmaster of New Brunswick, is strongly confirmatory of the facts and opinions stated by Sir Howard Douglas. Colonel Drury stated, that the letters coming to New Brunswick by way of the United States had increased very much, and in the same "ratio the letters by the English packets had been decreasing, there being such a constant communication between Liverpool and New York, that all the mercantile population at St. John's got their letters out in that way, for they found they got them much quicker, and that it is not to save the expense of postage, because the postage in the steamers is quite as much." Colonel Drury expressed his opinion that the establishment of a steam communication between Valentia, in Ireland, and Halifax, would be a very great benefit to the province; that it is probable steam vessels would be established from Halifax to New York, to Boston, and to Quebec; and that as regards both passengers and letters which now go by the American ships, they would all go by the steam packets from Valentia, inasmuch as passengers would, of course, prefer going out in 14 days to taking the chance of being 30; in confirmation of which opinion, and that passengers would prefer going across the Irish Channel and through Ireland to Valentia, to stepping at once into a New York packet at Liverpool, he added the fact of his having been once sent on shore in a boat on that part of the coast of Ireland, and that the vessel was three weeks afterwards going to Liverpool, and that it frequently happens that vessels are a fortnight from Liverpool getting out of the Irish Channel, 10 days very often, and in that time (a fortnight) in a steam boat from Valentia, you would be at Halifax.

Colonel Drury calculated that there would be a sufficient number of passengers to pay the expense of steam vessels, upon the ground that not only the passengers passing between the colonies and this country, but that also the passengers going to the United States would be induced to go by the Valentia and Halifax steam vessels, inasmuch as calculating upon 14 days from Valentia to Halifax, and three days from thence to New York, they would thus get to their journey's end in 17 days.

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Parl. Papers, 592.
1834, pp. 55 to 62.

The evidence of Mr. Fairbanks, a member of the Legislature of Halifax, contains much important information, and many valuable suggestions in reference to the subject. He confirmed the fact of a large portion of the correspondence with Halifax from England, coming by the way of the States; also of the correspondence to Quebec; and with reference to the project of a steam communication with Halifax, he stated the general opinion that it would be a measure of the greatest general importance, and one of the most effectual for the benefit of all the colonies that could be adopted; and he expressed his own belief upon the subject to be principally settled in favour of the beneficial results of a steam navigation with vessels of suitable dimensions, properly manned and established to go from Liverpool, touching at Valentia, and then proceeding to Halifax twice a month; that if that could be effected, his opinion was not only that the greater part of the passengers to British America, but that two-thirds of the American letters, in addition to all the colonial letters, would go by that communication; that there is not the slightest doubt that a communication by steam boats would be set up from Boston to Halifax without delay; that in a pecuniary point of view he was satisfied the steam communication would yield a large revenue, and that it was regarded in the colonies not only as a measure of the utmost importance at all times, but in time of war as most essential to the protection of the colonies, and the preservation of their communications with the mother country.

With regard to the most eligible points for arrival and departure on either side of the Atlantic, Mr. Fairbanks states forcibly the reasons why he considers Halifax the most eligible of the colonial ports, from the circumstance of its being open at all seasons, and from the fogs and floating ice which frequently render the approach to St. John's and the other ports difficult, if not impracticable; and with respect to the eligibility of Valentia, he stated, upon the authority of practical men, that in going to America "from Liverpool, they consider themselves when they get as far as Cape Clear out of all danger, and so in coming back that the principal dangers are in the Channel."

Parl. Papers, 592, 1834, pp. 62 to 67.

The evidence of Mr. Richard Smith, who had been resident three years in the respective colonies of Nova Scotia, Cape Breton and New Brunswick, also contains some valuable information and suggestions. He expressed his opinion that a very small portion of the letters that are sent from North America go by way of the present Government packets; but that if a steam communication were established between this country and Halifax, both letters and passengers would come thither; and he particularly pointed out the advantages of Halifax, as the best port for arrival and departure, from its being the metropolis of the province, and the chief port, and more accessible in the winter, being always open, and, to use the words of Mr. Smith, "as fine a port as any in the world." Mr. Smith's evidence is valuable, as giving the result of his experience of the comparative merits of steamers and of sailing vessels, having been in a steamer in a very heavy gale of wind in the Bay of Biscay for three or four days without the use of the rudder, which was shivered, and had no command of the vessel, notwithstanding which he described the steam engines as having managed the vessel extremely well, and never shipped a bucket of water all the time. On another occasion he describes himself to have seen the Atlantic "in as heavy a gale of wind as could possibly blow; that he was then in one of the British packets homeward bound from Halifax; but that if he had been in a steamer at the time he should have considered himself much safer than he did in the circumstances in which they were. The outward-bound packet which crossed them at sea had never been heard of, and must have foundered."

With regard to the most eligible port from which to depart from this country, Mr. Smith considers Liverpool as the port which would be the most likely to make the establishment answer; but he added his opinion, that those who could afford it would prefer going to Valentia, and that he should himself prefer going thither with a view to shortening the voyage.

Mr. Smith further stated, that he had no doubt whatever, in the event of the establishment of a steam communication to Halifax, that Boston would co-operate and establish steam boats to come to Halifax, which would complete the navigation by steam from New York to Halifax, there being already a steam communication from Boston to New York.

Mr. Smith's opinion, as manager of the mines, of the peculiar fitness of the Picton coal for the use of steam engines is deserving of consideration.

The Picton mines are 80 miles distant by land from Halifax, and will be connected with that town by the Shubenaccadie Canal now forming.

Mr. Busteed, 2 June 1829. Parl. Papers, 592, 1834, pp. 51 to 55.

The evidence of Mr. Busteed, chief clerk and registrar of the Supreme Court of Newfoundland, is strongly illustrative of the delays incident to the navigation of the Channel. On one occasion he describes himself to have sailed from London on the 9th of September, and that they did not get clear of the land till the 5th or 6th of October, and did not land till the 8th of November (60 days), for which reason he points out the western and south-west coast of Ireland as the proper point from which to start from the United Kingdom, by which, forming a conclusion from his own case, he considered that nearly a half of the voyage would be saved. Mr. Busteed considered the establishment of a regular steam communication between this country and the North American Colonies as a measure of great public utility, and one of the most desirable objects that could be accomplished.

Mr. Bates, 25 Jan. 1830. Parl. Papers, 592, 1834, pp. 67 to 71.

The evidence of Mr. Bates, a partner of a house having a very extensive intercourse with America, contains some points well worthy of attention. He states distinctly that all their correspondence goes by the Liverpool American packets, and they never send except to the West Indies by the established packets; that their correspondence with Canada goes also

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also by the Liverpool and New York packets, and that the greatest part of the correspondence of the United Kingdom, whether with London or with Liverpool, as well as a great portion of the Canadian correspondence, comes in the same way; and he added, that he suspected, whether lawfully or not he did not know, that the bulk of the Canadian and American letters were sent direct to Liverpool, in parcels from the coffee-houses.

The opinion of Mr. Bates as to the probable effect upon the correspondence, if a mode of communication more rapid than by the present Liverpool packets could be resorted to, may be considered the more deserving of attention, as coming from the partner of a house of extensive intercourse with the United States. He considered that the establishment of such a communication would entirely " have the effect of diverting the correspondence from the Liverpool packets that they send now by way of Ostend, because they find it goes more quickly in that way than direct by Hamburgh; that it is a matter that is watched by all merchants, to have their correspondence move as quickly as possible."

From the tenor of the information conveyed by all these individuals, it is evident that at present but a very small portion of the correspondence, either with the United States, or with the British North American Colonies, is conveyed by the British Packets; and that the same is also the case as regards passengers; and it must be matter for serious consideration, not merely with reference to the large amount of postage revenue which is lost at present to this country, but upon grounds of a much higher and more extended character, whether other arrangements than those at present in force should not be adopted for the carrying on the communications between the United Kingdom and its possessions in North America. There are many points of view in which it will be necessary to consider the question, the most material of which, however, is the expediency, or otherwise, of substituting steam packets in lieu of the present sailing packets.

The most important question to be considered is, whether Falmouth should still be selected as the port for the departure of the North American packets, either in case of the employment of steam packets or of the continuance of the present sailing vessels. With regard to the first of these points, the experience which the Government and the Postmasters General have had of the applicability of steam to the navigation of the ocean, since the establishment of the Falmouth steam packets to Lisbon, Gibraltar and the Mediterranean, will afford sufficient grounds for forming a conclusion as to its applicability for crossing the Atlantic. From the evidence above quoted, there would seem to be very little doubt but that a large portion of correspondence, as well as of passengers, would be diverted from the present Liverpool and New York vessels, by the increased rapidity of communication which would be induced by the employment of steam instead of sailing packets to North America; that, in fact, the British packets would be made in a much greater degree than they are at present, the means of accomplishing those objects for which they are specifically employed; viz. the conveyance of the correspondence and the carrying on the communications generally between the United Kingdom and the British North American possessions. A considerable outlay will necessarily be required for the establishment of fit and proper steam boats; and it must be matter for the consideration of His Majesty's Government and of the Postmaster General, whether the important objects to be accomplished, in reference particularly to the rapidly increasing prosperity of the possessions in question, as well as the probability of a return for such outlay, are such as to justify its being incurred.

See the description already quoted from Mr. Smith's Evidence of the Steamboat, with its rudder shivered in a storm in the Bay of Biscay.

The question of a probable return for the necessary outlay mixes itself up also very materially with the next important point for consideration, namely, whether Falmouth should still be selected as the port for the departure of the North American packets.

The difficulties, delays and dangers, incident to the navigation of the Channel, are so universally known and acknowledged, that it seems scarcely to be a matter of doubt, more particularly with reference to sailing vessels, that that port must be the most eligible as a port of departure, as well as of arrival, to and from which such vessels can at once sail free from all such dangers and delays. It has, doubtless, been upon such grounds that the port of Falmouth has hitherto been selected as the most eligible port for the departure of the British packets, whether destined to North America, the West Indies or the Mediterranean, inasmuch as from its extreme westerly position, and consequently great proximity to the mouth of the Channel, vessels sailing from thence are exposed in so much less a degree to the delays and dangers in question. Captain Beaufort, the hydrographer to the Admiralty, the whole of whose evidence upon this subject is well deserving of attention, stated " that although Falmouth is only 12 leagues to the westward of Plymouth, even that distance gives it an obvious superiority as a port of departure, to which favourable circumstance no doubt must be attributed the continued preference which Falmouth still enjoys over the neighbouring port of Plymouth, which in so great a degree possesses the same recommendations in point of situation, with many superior claims to be selected, as being the seat of a public naval establishment, more especially since this branch of the packet service has been transferred to the department of the Admiralty.

Capt. Beaufort, 20 May 1830. Parl. Papers, N°592, 1834, pp. 40 to 43.

But although there may be no doubt that at the time this packet establishment was formed, Falmouth was properly fixed upon for its station, as being the port which afforded the facilities above alluded to in a degree beyond any of the other ports of Great Britain, it has now become a matter well worthy of consideration, how far it may be expedient to continue that port as the exclusive station for these establishments, under circumstances which may be said to have extended the power of selection to all the harbours of the United Kingdom.

Under many of the circumstances described in this Paper, it is obvious that in considering the subject under discussion, the ports of Ireland must be those which are to be principally

cipally kept in view, inasmuch as without enlarging upon the altered situation in which that portion of the kingdom is placed with relation to England at the present time, as compared with the period at which the packet establishment was formed, or upon the circumstances which have produced a change so beneficial to both countries, there can be no doubt that, on any subject now arising for discussion in which both parts of the United Kingdom have a common interest, Ireland must be considered as an integral portion of that kingdom, and as affording with equal claims to consideration her local or national advantages for the promotion of the object in view. For it must be remembered, that in addition to the incorporation of the two Islands, produced by the legislative and political union, they have in a remarkable degree been brought together by the abolition of all commercial distinctions which impeded the free interchange of their respective productions, and by the general improvement which has taken place in their communications since the introduction of steam navigation, by means of which the intercourse between the opposite shores is maintained with a frequency and despatch nearly as complete as if it took place wholly over land.

It is true that the delays and difficulties so frequently met with by the sailing packets in their endeavours to get out of the Channel, are not of equal force as regards steam vessels, over which contrary winds and currents have a very diminished influence, and it may therefore still be deemed expedient, in the event of the establishment of steam packets, to adhere to the port of Falmouth as the station of principal departure. From thence all the London correspondence, the bulk of which at present, according to the evidence of Mr. Bates, is sent in parcels from the coffee-houses to Liverpool, by which the British postage is altogether evaded, would most probably be forwarded. This, however, it is fair to assert, would equally be the case if the port of primary as well as of final departure of the steam packets were at once from the western coast of Ireland. That such must sooner or later be the case, if any hope is entertained of accomplishing, by means of the British packets, that which is now almost entirely performed by the American vessels, namely, the conveyance of the correspondence as well as of the passengers from Liverpool, and the great manufacturing towns in the north of England, as well as from Scotland, is rendered sufficiently evident by the facts which have been already stated.

With regard to the proper port on the south-west coast of Ireland, to be selected as the port of departure, the harbour of Valentia appears, as well from its geographical position, its superiority as a harbour, and the facility of egress and ingress, as from the concurrent testimony of witnesses, to be a very eligible port.

The fact stated by the Knight of Kerry in his evidence, that vessels in their ordinary voyages from Halifax to Liverpool, frequently make the Skellig light, which is only nine miles from Valentia, is important, as showing how nearly the harbour of Valentia is in the direct line of the passage from North America to Great Britain, and *vice versâ*; and that, consequently, assuming steam packets to be established, and assuming them still to start with the London correspondence and passengers from Falmouth, it would in fact be in their direct course to call at Valentia to replenish their coal stores, and to take on board the correspondence and passengers from the North of England and from Scotland, in which case also there are good grounds for assuming that a steam communication would ere very long be established by private enterprise between the ports of Liverpool and Valentia.

It must be always borne in mind, in considering subjects of this kind, that it is not merely the probable amount of revenue arising from postage, which is to be considered, but that objects of far higher consequence and of extensive national importance, not only demand attention, but at the same time demand, or it should be rather said, would justify to a certain extent the expenditure of a portion of the revenue of the Post-office, with a view to the accomplishment of those objects.

In the present case the evidence of the Knight of Kerry points out very fully the advantages, in a political point of view, which would result from the establishment of Government steam packets between Valentia and Halifax.

In addition to these, it is impossible not to bear in mind the extensive benefits which would probably be ultimately derived by a large portion of the kingdom of Ireland, from the increased intercourse which would be carried on through its whole extent from Dublin, as well as from Belfast to Valentia, and likewise from Waterford and Cork to Valentia; in fact, all along the lines on which passengers to and from America and England and Scotland would travel, and this in addition to the advantages arising from the gradual establishment of a town of probably considerable extent and importance on its south-west coast, and one which, in the possible event of war, would become in many points of view of especial value to the United Kingdom.

In the present state of Ireland it is submitted, that any measure which is likely to be productive of benefit to that kingdom must, to a certain extent, justify the expenditure of a portion of the public revenue, the more especially if there are other grounds of national importance to justify such expenditure; and any measure which shall contribute to increase the inland intercourse of individuals from Great Britain through a considerable portion of Ireland, and consequently add to the diffusion of capital and employment, must be productive of extensive benefit to, and tend greatly to the welfare and prosperity of that kingdom.

I have the honour to be, My Lords,

Your Lordships' most faithful and obedient Servant,

To the Lords Commissioners of His Majesty's Treasury.

(signed) *T. Cha^s Harrison.*

T. C. Harrison, Esq.

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1727. Do you consider the public at large in this country, as well as in Ireland, are extremely interested in the project of a railway to the Harbour of Valentia?—The Committee will observe, on perusing the above statement, the extensive benefits which I have contemplated as likely to result to this country, as well as to the North American Colonies, and especially to Ireland, from the establishment of a regular and punctual communication by means of steam vessels from Valentia Harbour to Halifax, in consequence of the increased intercourse which I conceive would be inevitably caused by such an establishment throughout the whole of the great lines of communication in Ireland, from Dublin as well as from Belfast to Valentia, and likewise from Waterford and Cork to Valentia. I need not add how greatly these important objects would be facilitated by the establishment of railways.

1728. Were the Commissioners prepared to make any recommendation respecting the packet station in Ireland?—The Commissioners of Revenue Inquiry were in the midst of that, amongst numerous other inquiries relating to the Post-office, upon which they had collected important evidence, at the period of the termination of their functions.

1729. Do you recollect whether they were prepared to make any recommendation?—They were in fact considering the subject; and the important evidence which they had collected, of which the Committee are now in full possession, will best show the progress which they had made towards arriving at the proper conclusions; but I am not prepared to say that they had made up their minds to an absolute recommendation.

1730. Can you state what was running in their minds upon the point?—The mass of evidence certainly pointed to Valentia Harbour; and I should say, to the best of my recollection, that, as far as the commissioners had had the opportunity of considering and discussing the point, Valentia Harbour was deemed the most eligible station for the objects contemplated.

1731. Have you formed any opinion as to what port on this side of Ireland would be the best to communicate with England, still bearing in mind Valentia Harbour?—In fact, I combine Valentia Harbour with all the three great lines of communication; viz. Belfast, with a view to the communications with Scotland by Donaghadee and Port Patrick; Dublin, for the communications with Liverpool and the great manufacturing districts, as well as for the main line of communication from London *viâ* Holyhead; and Waterford, for the communications from the South of England *viâ* Milford and Bristol.

1732. My question is with reference to the formation of a railway; from which point in Ireland do you think it most advisable that the railway should start, having Valentia as its ultimate point of destination?—I should say at the first blush, Dublin certainly; but the question of the railway is new to me; I have not considered the subject so as to give any decided opinion upon it, but I should say that Dublin, upon the first consideration, was the point in the Irish line which would be most important to be introduced.

1733. Do you consider Dublin a more advisable starting point for a railway than Waterford?—With reference to London, it would be matter for consideration, because it is almost a straight line from London to Valentia *viâ* Waterford.

1734. But it would be desirable for both?—I think so; but I contemplate, if capital can be found for them, that there should be three great lines; viz. from Belfast, from Dublin and from Waterford.

1735. Suppose the great Western Railway to be completed, would not the line from Waterford to Valentia be more used than the line from Dublin to Valentia, as the means of intercourse between America and these countries?—I should say, that from London, certainly, Waterford might become the most important and most frequented line, because, as I have already observed, it is almost a straight line from London to Valentia *viâ* Waterford and Milford, the distance also being less by about 40 miles, than the distance of London to Valentia *viâ* Holyhead and Dublin; the total distance by the latter route being about 537 miles, whilst that by Waterford and Milford is only 496 miles.

1736. And could not the line be completed at a much less expense than the line from Valentia to Dublin?—The difference of expense would, I should conceive, be very considerable, inasmuch as the distance from Waterford to Valentia is only 140 miles, whilst that from Dublin to Valentia is 207 miles; a total difference of 67 miles.

The

The Knight of *Kerry*, called; and Examined.

1737. I BELIEVE you were very instrumental in calling the attention of the Government to the necessity of carrying on public works in Ireland upon an extended scale some few years ago?—In the year 1817, in consequence of the great distress prevailing, I represented to Lord Liverpool's Government the expediency of applying public money towards the execution of works of a useful nature, upon the principle of repayment; and in that recommendation originated the first application of such money for that purpose.

1738. Did your recommendation apply to England as well as to Ireland?—My recommendation only applied to Ireland. I afterwards submitted to the Duke of Wellington's Government a detailed proposal for the formation of a Board of Works in Ireland, and a large application of capital to works of a remunerative description.

1739. Was the whole of your project carried into effect?—The Duke of Wellington had agreed to make an experiment of the plan which I proposed in a certain number of counties, and if it succeeded to extend it. In the mean time the Government was changed, and Lord Althorp sent for me to learn the nature of the proposition which I had made to the former Government. I had a very full communication with him, at which Mr. Spring Rice and Sir John Newport attended. Lord Althorp suggested all the difficulties that occurred to him on the proposition I made, which I answered in a manner satisfactory to his Lordship, and in which answers I was borne out by the opinions of Mr. Spring Rice and Sir John Newport; and it ended by Lord Althorp stating his determination to carry the plan I recommended into full effect. The Board of Works now established was adopted, but the powers given to that Board fell very far short of what I had proposed. The nature of the proposal was contained in a paper that was lithographed, and furnished to the different departments. I unfortunately have no copy of it by me, but I have no doubt before the Committee closes I shall obtain it; and I should rather refer to that for precision, than venture to give oral evidence upon the subject.

1740. Does that paper embrace your views generally as to public works?—Yes.

1741. Have you seen any occasion to add to or alter those views?—The working of the system under the Board has been so useful, as far as its powers extend, that I feel more confirmed in the original views I entertained upon the subject.

1742. Do you consider the Act under which the present Board of Works is constituted as very defective?—I do in many respects. I have been looking over the evidence given by Colonel Burgoyne to this Committee, and I concur entirely in the observations he makes in his evidence. They are given with so much accuracy, that I should rather adopt them than repeat and perhaps weaken them.

1743. This Committee has received evidence of a very strong character from most intelligent witnesses, who are perfectly disinterested, many of them, in the project, to the effect that it would be most desirable not only for Ireland, but for the United Kingdom at large, that a railway should be constructed across Ireland to the harbour at Valentia; you have, I believe, turned the subject very much in your mind, and do you concur in those views?—From local circumstances I am a party so very much interested, that I would say to this Committee (as I did to the Commissioners of Revenue Inquiry) that the whole of the case of the railroad or the adoption of a packet station was a professional question, and you ought rather to have professional parties to give their opinion upon it, than any body having local interests. I am perfectly ready to suggest sources of information which probably may not occur to the Committee. For instance, both respecting the point of departure, and with respect to the question of the utility of railroads as a mode of transit across Ireland, I should say the most impartial and judicious opinions would be derived from Americans. They are the persons carrying on the trade, and they are the parties who would become travellers along such lines of communication; the raw material which is the subject of transit is American, it is conveyed in American vessels, is American property, and the owners are the parties interested in its cheap and safe conveyance. When a plan was formed many years ago for the purpose of a passage across the ocean by steam, the directors derived the most valuable information from the Americans and the British colonists. There are several of these at present in this country; and I should say, that Americans and professional men, engineers and naval officers, are the parties from whom it would

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be most desirable to obtain information upon all those points to which the last question refers.

1744. In the county of Kerry has not extraordinary benefit been found to result from opening roads through uncultivated and mountainous districts?—Yes, very great. The improvements are set out in various reports of engineers, which are accessible to this Committee, and which give the specific details establishing such benefits in the most complete manner. I can, in a general way, say that great benefit has been derived to the county of Kerry from the execution of public works.

1745. Do you not think also that the general revenue of the country has been much increased by it?—Very much.

1746. Do you not stand in need in your county of such public works, and is there not ample room for them?—Public works to a great extent have been already executed in Kerry, some are in progress, and there is still a large field for improvement.

1747. What public works have been executed in Kerry?—There are two transverse lines of road passing from Limerick to Killarney, and from Listowel to Cork, which open a district, theretofore an uncultivated waste, and a sort of fastness for robbers, and which is now a scene of great improvement, in which lands are cultivated, manures distributed in every direction, new farms established, and comfortable houses built. The case is so accurately detailed in the Reports of Mr. Griffiths and Mr. Kelly, that I would recommend the Committee rather to refer to them. There is also a line of road made in the mountain barony of Iveragh, which is now passable for carriages; before, all the butter, the produce of that district, was conveyed upon horses' backs, a distance of 90 miles, to Cork; a horse carrying two, at the utmost three firkins, and the carriages now conveying from 24 to 30 firkins.

1748. Are those Scotch cars?—Yes, principally.

1749. Were the roads made entirely at the public expense, or did the district contribute to it?—The last road I alluded to was the first made; it was made by an advance of public money, every shilling of which has been repaid to Government.

1750. Has that been the case with all roads made in Kerry?—No; the transverse roads between Cork and Limerick, and the other towns mentioned, were made, I think, by free grants. There are several other roads made by advances of public money, and there is a great one in progress of execution.

1751. Independent of the great benefit arising to society from the improved state of the country, has not the public, in your opinion, received an equivalent in the increase of the revenue by the money so expended?—I know in several cases it was established that a considerable amount of revenue was received in districts where none was levied before; and it may generally be said to be true; it was proved in the cases of Mayo and Galway.

1752. Is it not also applicable to Kerry?—I should say it was.

1753. Did you receive a loan from the Commissioners of Public Works?—Yes.

1754. Was it for the purpose of working slate quarries?—Slate and stone quarries.

1755. You say that tracts of land have been brought into cultivation in the neighbourhood of those roads since their formation; upon what tenure have they been taken into cultivation in their present occupancy?—On various tenures. There are different proprietors; and the lands held under different proprietors differ in the extent of tenure; they give some longer and some shorter, but generally a lease of 21 years.

1756. At a fixed rent?—Yes, generally for fixed rents.

1757. Which of the various descriptions of tenure under which property is taken do you consider the most available, as a means of encouraging these improvements and cultivation?—I should say a lease of 21 years.

1758. Is that a sufficient tenure to induce a spirited system of cultivation?—I think a check on the part of the landlord by a reasonable limitation of tenure is desirable.

1759. Is there not such a competition for land in most districts of Ireland that the landlords of waste lands who proposed to let it out to tenants at will, would still find occupants who would lay out their labour upon the land?—Such is the competition, that you will find occupants for the soil, however short the tenure they have; they would work that land for food; I should not say for improvement.

1760. Under

1760. Under that system improvements would not be carried on in a spirited manner?—I think not.

1761. Would that not depend upon the confidence which they have in their landlords?—A great deal. I have had considerable improvements conducted on my own property by tenants at will.

1762. Would it not be desirable, in your opinion, to encourage the granting out of lots of land upon permanent leases, with a view to its improvement; and would it not be just for the Crown, when a tract of waste land has been opened upon by a large expenditure of public money, to appropriate a certain portion of waste land for the purpose of leasing it out, or for granting it for long terms to individuals?—I recommended a plan of that description to the Crown long since, and I think it would be attended with very desirable results.

1763. Will you specify the particulars of that plan?—I allude to a tract of land now come into the hands of the Crown, and which they are farming.

1764. Your proposition did not extend to waste lands generally improved by the making of roads?—It was a recommendation as to a particular estate that had fallen into the hands of the Crown, Poble-o-Keefe.

1765. But the question is, whether you do not think it would be desirable to increase the landed property at the disposal of the Crown for this purpose, by appropriating to the Crown a portion of the waste lands opened through this expenditure of public money in the making of roads across them?—I do not think it desirable to make the Crown an extensive landlord of new tracts.

1766. Would not the terms on which the Crown would lease out this land, with a view to encourage its improvement, be more likely to produce a spirited improvement of the tenantry, than that which the landlords would voluntarily offer?—Certainly, if it was conducted under a proper system, the Crown could apply greater sums than private parties, but I think it is rather beneficial that the Crown should take the lead in experiments made on a limited extent.

1767. Do you think the objection against the Crown becoming a permanent landlord might be obviated, by requiring that the Crown should after a certain period dispose of the lands to other individuals?—That implies the danger of allowing the Crown to become a permanent landlord.

1768. Could it be corrected in that way?—I think it might.

1769. And if so, it would be an advantageous arrangement?—The powers of the Crown to improve must be greater than that of individuals.

1770. Would not the same objection apply to public companies formed to improve land in Ireland?—I think, in general, the same objection would apply to a company; they would require a similar check to that which was suggested in a former question.

1771. Would you consider it desirable that proprietors under strict settlement, should have the power of charging their inheritance with a certain portion of the expense of great permanent improvements upon the estate?—I most strongly recommended that in the plan I laid before Government.

1772. Have you seen any thing since to alter your opinion upon that subject?—No, quite the contrary.

1773. What check would you provide for the due administration of such powers in Ireland?—The check I recommended was, a deliberate examination of all such questions by the Board of Works, through its officers, and a decision of the Board thereon.

1774. Would you think that would be quite sufficient in the case referred to in the last question?—I treated it as sufficient in my plan.

1775. Would you think it necessary that the Court of Chancery should have any controlling power over such disposal of property?—I consider the Court of Chancery has such power over any property in that court. I think it would be desirable to call in the check of the Court of Chancery if it can be cheaply obtained.

1776. Are you aware that the heritors of Scotland have that power?—Yes. They exercised it in the case of Highland Roads and Bridges, and I understand that they exercise it in the case of private improvements under particular Acts.

1777. You would call in the Court of Chancery, in concurrence with the Board of Works as an effectual check; have you any idea what limitations you would place on the amount expended by the proprietor in such a case as that?—That would depend very much upon the purpose to which the expenditure is to be applied.

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It should vary very much in its application to any purpose of ornament and luxury compared with that of substantial improvement.

1778. Ought it not to be confined to improvements most strictly?—I should say so.

1779. An improvement that would be of permanent benefit to the property?—In the plan I proposed, I contemplated nothing but substantial improvements of the property, conducted upon the most judicious principles, and with all the checks that men of science could apply under the Board of Works.

1780. Do you think the operation of such a power would be very beneficial to the land-owners of Ireland and this country too?—I think Ireland stands particularly in need of some such powers.

1781. Do you contemplate any difficulty in the exercise and control of such powers?—Not with the checks that are recommended.

1782. Would it not be of essential benefit that money should be advanced for this purpose to the landed proprietor by Government, at a moderate rate of interest, and with an easy sinking fund?—I should think where the security for repayment is adequate, that it is the interest of Government and the country, as well as of the parties, that it should be advanced on the most moderate terms, both as to interest and repayment.

1783. Are not the terms contained in the present Act, such as to prevent all applications by private individuals under it?—I think they amount to such a discouragement, as very much to defeat the purpose of the Legislature in the Act.

1784. Are you aware of any advances having been made under the Act to private individuals?—An advance was made to myself by the Board of Works.

1785. Under that Act?—Yes.

1786. Can you state to the Committee the expense attending upon that transaction?—The loan was 7,000*l.*

1787. What was the expense?—I think it was above 150*l.*

1788. Was the estate so given in pledge, encumbered?—Yes.

1789. Were you obliged to apply to the incumbrancers to consent to the loan?—Yes, and to give a precedence to Government.

1790. Could you procure the money without obtaining the consent of the mortgagees to such precedence?—Certainly not.

1791. Has not the property been considerably benefited by the advance?—A work of considerable extent and value, I may say, has been created by the application of the capital.

1792. And employment afforded to the poor?—Yes, extensive employment afforded.

1793. How many men are employed at the quarries?—The number of men varies from 150 to 200, and that number will be increased in proportion to the uncovering of surface.

1794. How many men were employed at the time the loan was advanced?—Fifty to seventy, upon an average, previous to the loan.

1795. Is it not in a very remote part of the country where the work is situate?—Yes, the most distant part from London, perhaps, in the kingdom.

1796. If the season has any effect on the number of men you are able to employ there, how has the 7,000*l.* been the means of employing 150 or 200?—A part of the application of that capital was for the building of houses in which permanent workmen are employed connected with the works.

1797. Was there not additional expense incurred on account of the loan, to that which you have already stated?—Very considerable expense, exceeding in the entire 350*l.*

1798. State to the Committee what that was?—There were titles to be made out.

1799. As strictly as if you were borrowing from a private individual?—Yes, a title was to be made out to the satisfaction of law officers of the Crown, as counsel to the Board; and being strict tenant for life, there were deeds to be executed by my eldest son, who concurred in the security; there were also deeds of a voluminous kind to procure for the satisfaction of the Crown; the precedence to be allowed by the mortgagees and by my younger children. I believe that few persons whose estates are settled and mortgaged could comply with the restrictions of the Act so as to obtain loans, however important to the inheritance their application might be.

1800. Can you suggest to the Committee any means of getting rid of such expense

expense incident upon the loans of money to individuals?—I should consider that a question for lawyers, as to what legal expenses can be saved.

1801. Would not considerable expense be saved, if priority was given in all cases to the loan made by Government?—Certainly.

1802. In your opinion, should such precedence be given?—I think it ought, with a sufficient check for the application of such loans.

1803. What check would you propose?—It should be first established by reference to the Board of Works, that the application of such money would be most beneficial to the inheritance, and that the works for the improvement of such property be conducted under the severest control from the Board of Works itself.

1804. In your opinion, would that be a sufficient check?—That is what I recommended.

1805. Would it not be a violation of the contract with the mortgagees and the other incumbrancers?—With a due check, it must always operate to increase the security of the land.

1806. Would you give the Board of Works the power of draining any district upon the application of a certain number of proprietors, the benefit derived to the lands to be ascertained, and the expenditure to be a charge upon the estate?—The principle upon which I recommended any great works was, that besides the previous examination and the engineer's report as to the mode of executing any improvement, that the repayment should be made as soon as possible by the districts improved.

1807. Are there not considerable tracts of land in Ireland capable of great improvement by means of drains, but where the proprietors are unable to carry it into execution, not having the power to enter the lands of their neighbours?—There are.

1808. Would not that difficulty be overcome by giving the power to the Board of Public Works?—It is absolutely necessary to give such a power to some authority; I preferred giving the power to the Board of Works, if properly constituted, rather than to any local board whatever.

1809. Can you give us any information respecting the desirableness of communications to America through the West of Ireland, besides that which we have already got in the Papers printed by the House of Commons last year?—Lord Wallace and other Commissioners of the Revenue Inquiry told me, that they had nearly made up their minds, if their official power had continued a little longer, to recommend a general packet station for the southward and westward, at the most westerly port of Ireland suited for such purposes. Since that, the Duke of Richmond, as postmaster-general, called for the production of those papers contained in the Report laid before Parliament called "Western Harbours," and was disposed to adopt the same view for establishing the best communication for mails with our North American Colonies. Those are the two principal circumstances that have arisen of an official nature.

1810. Do you not consider the plans printed with that Report afford quite unanswerable evidence of the necessity of establishing a post-office communication from the West of Ireland with our colonies?—I am a party very much interested in the question, and might be supposed to be biassed: I would rather refer to facts. It certainly is the opinion of almost all colonists and Americans that I have communicated with.

1811. Supposing a general packet station was established at any of the western harbours; Valentia, for instance; what mode of transit for goods and passengers would you suggest in Ireland?—I have recently learned that parties both in America and in the manufacturing districts of England, contemplated a railroad across Ireland, from Dublin to the extremest West, as a practical plan, and likely to be attended with very profitable results. I was aware that the inhabitants of the United States had suggested such a scheme.

1812. If despatch in the intercourse between the two countries is an object, what *terminus* would you yourself recommend or suggest for a railroad communication from Valentia?—I consider, both with respect to passengers and goods, that the direction should be, as far as possible, upon the best line from America to the manufacturing districts; through Dublin, as one point, and Belfast as another, combining those objects. With respect to the case of passengers from London and the South of Europe, Waterford would be the shortest line.

1813. Would not Galway be as beneficial a western port as Valentia for that purpose?

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purpose?—I conceive that the principle of communication is to take the shortest line of sea transit, and to travel as long as possible in a proper direction by land. I feel that it would be invidious in me to institute any comparison between harbours. It is a professional question.

1814. Do you think the line by Waterford as preferable a line as by Dublin for the railway?—The distances are given in evidence, and they speak for themselves. I have already said, that as the transactions between England and America are manufacturing and commercial, the most advantageous line would be that most direct from New York and our North American Colonies to the manufacturing districts of Great Britain. Passengers, generally commercial men from nations in the South of Europe, would probably prefer the more southern line in Ireland, whilst those from the North of Europe, including all Germany, and Russia, Sweden and Denmark, would pass by Hamburgh, Liverpool and Dublin.

1815. Then you think that both lines would be desirable?—I think so.

1816. Do you not think if the line were adopted from Valentia to Waterford, that a great portion of the line from Valentia to Cahir would be common to the Dublin and Waterford lines?—Such lines might be made to coincide, but any opinion I could give upon that would be merely founded on what I have heard from engineers, who can be directly consulted by the Committee.

1817. Have you any safety harbours on the coast of Kerry?—We have natural safety harbours, but not artificial ones.

1818. Are they sufficient for the wants of the community in that respect?—By no means.

1819. Are not safety harbours a work that ought to be defrayed entirely at the public expense?—I think in that and all other cases, it is desirable to call in as much local contribution as you can at all obtain and justify.

1820. As it is the proprietors of shipping in England and elsewhere who lose at present their property from the want of safety harbours, they are as much interested, and perhaps a great deal more than other persons in these safety harbours?—Nobody is more convinced of the great importance of constructing safety harbours than I am. As Commissioners of Fisheries, we were desirous to distribute safety harbours around the coast, but the funds were so limited, that we could not do so in any effectual manner.

1821. Are there not safety harbours and anchorages to the north of Valentia, in the Shannon and Louth, the Kenmare River, Bantry Bay and Cookhaven?—The Report of the engineers under the Board of Works shows that safety harbours are very much wanted in the lower Shannon; there are several good harbours in the South and West of Ireland.

1822. Is there not a safe anchorage to the north of Valentia, in the Shannon?—There are anchorages within the Shannon, but they are considered not very safe.

1823. Is there not great distress at this moment in the county of Kerry?—There is extreme distress prevailing in a great part of the county.

1824. Is there not a great want of provisions?—Yes, from the failure of the former potatoe crop, and considerable alarm as to the damage done to the early crop this year.

1825. Are there fears of the early crops?—Yes; in several districts the population subsist merely by the importation of provisions.

1826. From whence?—Some from the county of Cork.

1827. How are the means obtained for that importation?—By private exertion.

1828. Would not then this be a favourable opportunity for the expenditure of money in public works in that part of the country?—Certainly.

1829. If private individuals were prepared to commence, and had the means of completing the railway from Valentia to Waterford, do you think there would be any occasion to advance public money to the poor for those districts?—If private individuals are able to execute the work, it is for them to consider whether they will require any aid from Government.

1830. If private individuals were prepared to construct the railway now from Valentia to Waterford, would you recommend Government to advance the money to make the railway from Valentia to Dublin?—I do not think the existence of a road from Valentia to Waterford would in any degree preclude the necessity or utility of a road from Valentia to Dublin.

1831. You have spoken of great distress at present prevailing in Kerry; how is that distress relieved?—By the importation of cargoes of potatoes from several points.

1832. How do the peasantry in danger of starvation from failure of their own crops, become possessed of the importation of potatoes?—I can only speak for those on my own property; they must purchase them. I applied to the Board of Trade to send from the cheapest ports in Ireland some cargoes of oatmeal to the distressed districts of Kerry for sale, and it has been recommended by the Board of Trade to do so.

1833. Have they, when their own crop has failed, the means of such purchase to the extent of maintenance of themselves and families?—The persons in work have the means of purchase, but I fear that the distress reaches to many families who have not such means; very likely there are multitudes who must depend solely on charitable contributions.

1834. Is it within your knowledge that there is this distress approaching to starvation in the case of several families?—I will read a passage from a letter which I received the day before yesterday: "I believe but for sixteen pecks of potatoes which I obtained from a vessel belonging to a neighbouring town (and with great difficulty obtained), that thirty or forty families of quarrymen and labourers would have gone to bed supperless last night." There are multitudes who are able to pay who are on the verge of starvation in those districts at present.

1835. How long will they be able to pay?—The persons in my employment will continue to pay all the spring, but others will not.

1836. What are their wages per day?—The day-labourers receive from 10*d.* to 1*s.*; some inferior day-labourers, but very few, receive 8*d.*: and the contract labourers (and much the greater part is done by contract), vary from 1*s.* to 1*s.* 6*d.* and 2*s.*

1837. Are not those wages above the average wages of the country?—Considerably.

1838. Do those labourers hold a house or any land?—Some hold their houses and land from me, but the greater number under my tenants.

1839. On an average, what quantity of land do the labourers hold each?—I cannot say exactly the average; my plan is to give three acres, and the rent is 10*s.* an acre, and a good slated house for 12*s.* per annum; where they have the command of manures, the rent is higher.

1840. Suppose the Government to grant a moiety of the amount required for making a road through a wild and uncultivated district, do you think there would be any objection to give the power of raising by compulsory presentment the remaining moiety from the barony or the district benefited by the road?—I apprehend, in all cases of such works, the district improved should be taxed for payment by compulsory process.

1841. Have you ever considered the propriety of attempting the reclamation of waste lands by the establishment of Poor colonies, similar to those which exist in Holland?—I was a member of the Committee that had that object in view, and I think it is extremely desirable.

1842. Would you effect that object by empowering grand juries to take tracts of this description of land, and to raise money by presentment for the necessary buildings and the purchases, and to invest the superintendence of those establishments in a committee appointed by them, or what machinery would you suggest for conducting them?—I would not propose to tax by grand juries the land generally for the purpose; either the case is of such a public nature that it ought to be done by advance of public money, or so much connected with the improvement of private property, that it should be levied from that property.

1843. I am supposing the grand juries purchased it?—I should not wish to vest in grand juries the administration of such a power; I do not think them suited for it, and they are a fluctuating body.

1844. In what body would you vest that power?—In some authority emanating from the Board of Works.

1845. Your objection to the grand juries would not exist, if the powers of the grand jury were of a more continuous nature?—It would be diminished.

1846. Do you think that the constitution of grand juries as a public body can be re-modelled with advantage?—I consider the principal duties of grand juries to be their functions connected with the criminal law, and that they are not qualified for the execution of public works.

1847. Would you deprive them of their fiscal duties?—At present I do not think you can give them with advantage to any other body; but those fiscal duties are only an appendage to their more important trust as part of the criminal judicature of the country.

Burton Macnamara, Esq. called in; and Examined.

B. Macnamara, Esq. 29 May 1835.

1848. I BELIEVE you are a Captain in the Navy?—I am a Post Captain in the Navy.

1849. I believe you are acquainted with the western coast of Ireland?—I am.

1850. Are there sufficient safety harbours upon that coast?—Not at all.

1851. Do you mean to say that there are no safety harbours from Sligo Bay to Bantry Bay?—There are several anchorages there, but they are places I would not run in, in bad weather.

1852. Does the Shannon afford safe protection for vessels running into it?—Yes.

1853. Near its mouth?—No, not near its mouth.

1854. How high should you go up?—For a large ship, I should go as high as Catrick, which is about 20 miles from its mouth.

1855. Where would you propose building safety harbours upon that coast?—By the construction of a pier at Kilrush, and making a breakwater there; and from Kilrush I would go to Lisconnel; I think Lisconnel is the next place I would select; there are several places on the Connemara coast, of course including Galway.

1856. Do you think it would be possible to form a safety harbour in the bay of Listowel, which was capable, in a storm, of affording protection to a vessel of 500 tons burden?—I do, decidedly.

1857. Which side of the bay?—On the north side. There was a very valuable vessel from America which was wrecked the other day, which if the harbour had been there, would have been saved.

1858. There is already a small fishery pier there?—Yes.

1859. Do you consider it to be of any value?—Not the least.

1860. Would you construct the safety harbour in the neighbourhood of that pier?—I would.

1861. Would it be accessible in every wind?—Yes, it would be accessible; you would have to beat up against the wind from the eastward. The whole of the fishery piers on the coast are quite defective, and not sufficient for the purpose intended; as for instance, there is one built at Seafield, which is built on a long ledge of rocks that nobody can get near to.

1862. A petition was presented to The House some time ago, praying for the erection of a fishery pier at a place called Ballybay; do you know the spot?—I do.

1863. Do you think the erection of a pier there would be advantageous to the fishery in the harbour of Galway?—Yes, as a safety harbour.

1864. And be of advantage to the inhabitants for the export of their produce?—Decidedly.

Lunæ, 1° *die Junii*, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Henry Berens, Esquire, called in; and Examined.

Henry Berens, Esq. 1 June 1835.

1865. WHAT office do you hold?—At present I am a Commissioner for inquiring into the Revenue of Excise.

1866. Did you not formerly belong to the Commission for inquiring into the Irish Revenue?—I did.

1867. While acting as such commissioner, was not your attention drawn to the post-office communication?—It was to the post-office communication generally, both foreign and domestic.

1868. Was your attention drawn to any point in Ireland, as being the most proper one?—It has been certainly suggested to us, that the particular point of departure for the communication to America and to other parts of the Western world, might be improved by bringing it more in the direction of the destination of the correspondence.

1869. Was it not that they should pass through Ireland?—Ireland was suggested certainly.

1870. Was any port in Ireland particularly suggested?—The port of Valentia was

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was mentioned to us as being the most westerly port, not only of Ireland, but all Europe.

1871. Were any other advantages pointed out respecting Valentia?—The principal advantage was certainly its position, with regard to its westerly situation. It was also suggested that it had peculiar advantages, from its enabling shipping to avoid all the dangers and delays arising from the navigation in the Channel, and we had evidence to show that sometimes a large proportion of the delay of the whole voyage from America was occasioned in the Channel.

1872. Might not the same advantages arise from the use of the port of Galway?—I am not sufficiently acquainted with it to be able to state that.

1873. Was your attention drawn upon that occasion to the harbour of Galway?—I do not recollect.

1874. At that time steam was not so much made use of as it is now?—No, it was not used so much as it is now.

1875. Steam being now so much more used, would make the port of Valentia much less valuable, in comparison with Galway and other ports?—Yes, the advantage by the employment of steam would make a difference in that respect.

1876. Are you now a Commissioner of Excise Inquiry?—Yes.

1877. Have you not had an opportunity of ascertaining in that capacity the great decrease in illicit distillation in Ireland?—Certainly; not only on this occasion, but upon both occasions; the commission I am in now and the former commission.

1878. Did you not also find, that there was less illicit distillation in those places where there were means of communication, and which were not shut up for want of communication by means of roads and bridges to other parts of the country?—The evidence tended to prove that illicit distillation was most successfully carried on in those situations in which the connexion with towns and markets for the sale of spirits was least accessible.

1879. Was it not visible where new lines of road were made, that illicit distillation to a great extent ceased?—We were not practically through the country in Ireland with that object, but we were in Scotland, and certainly the same thing applied to Scotland completely, and therefore, I presume, of course would apply to Ireland.

1880. That illicit distillation stopt when roads were made through the country?—Very much so.

1881. And that, in your opinion, must be the necessary consequence of making roads?—I should suppose, certainly, from all the evidence we have received.

1882. Could you furnish the Committee with any returns upon that head?—I would beg to refer the Committee to the following passages in the Examination taken by Sir Henry Parnell and myself, in Dublin, in December 1833.

7th Report of Commissioners of Excise Inquiry, part 1, page 384; Examination of Mr. Arney, Excise Collector of Lisburn.
Page 387, Examination of Mr. Halliburton, Collector of Sligo.
Page 391, Examination of Mr. Gill, Collector of Drogheda.
Page 399, 400, Examination of Mr. Wright, Collector of Foxford, D. 7th Report, part 2.
No. 1, page 60, Report of Lord Lifford.

The tendency of the whole of the evidence which we took on the subject, both in Ireland and Scotland, would lead to the same result; viz. that the practice of illicit distillation is principally carried on by the small farmers, as being the readiest means of converting their grain into money, and the practice must be necessarily checked by giving them increased means of access to legitimate markets.

1883. Have you any further suggestions to make to the Committee?—I would beg leave to add, that having formed a strong opinion (founded on the evidence received during my former commission) as to the peculiar eligibility of the Western coast of Ireland for a post-office station, that opinion has been materially confirmed from the opportunities I have had of considering the question since, not only on account of the great improvements which have taken place in all communications by steam, but more especially from the great increase of facilities in the communications between London and all parts of Ireland, which must result from the railway (for which an Act has just passed) between London and the Western counties of England; such facilities being still further extended by the railway across Ireland, which I have heard to be in contemplation, there can be no doubt that these addi-

Henry Berens, Esq.

1 June 1835.

tional means of intercourse with the Western coast of Ireland must materially tend to strengthen the arguments to which I have already adverted, in favour both of the practicability and also of the advantages, in a national point of view, of selecting that part of the kingdom as a point for the departure and arrival of communications with the Western parts of the world, whilst at the same time the local advantages to Ireland from making this great thoroughfare pass through the whole breadth of the Island are sufficiently obvious.

Colonel *John Fox Burgoyne*, called in; and further Examined.

Col. *J. F. Burgoyne.*

1884. WILL you have the kindness to inform the Committee, whether, in your opinion, the difficulties raised by the Lords of the Admiralty with reference to the crossing of old Dunleary Harbour are well founded?—I have a very decided opinion, that the inconveniences that have been anticipated from allowing the extension of the railway to cross old Dunleary Harbour have been very much over-rated. It would be too long in this place, and not very intelligible without the plans, to enter into the particulars of my reasons. I would wish, however, to state generally, that the advantage of public works in Ireland is so great, that I think it would be very desirable if the public departments would establish as a maxim, instead of endeavouring to obtain as much as they can from these works, on the contrary rather to seek what they can contribute towards them.

1885. Are you of opinion that the proposed extension of the railway will be of great advantage to the public, and extremely useful for commercial purposes?—I think the extension, as far as at present contemplated, would be of very great advantage to the public generally, particularly to the commercial interest and for passengers by the mails; but I am in hopes that it will ultimately be carried still further, and that it will get to the granite field near Dalkey, and be the means of establishing a traffic in the export of that material, which does not at present exist, and which can hardly be created without such further extension of the railway.

1886. Will it facilitate the commercial intercourse between Kingstown Harbour and the Grand Canal?—No doubt; it will establish an intercourse which is not to be effected otherwise.

1887. You have heard the suggestions which were made to this Committee by Mr. Pim, namely, that in undertakings of acknowledged utility, such as the extension of canals and railways, where the parties subscribe from their own funds one-third of the cost, that your Board should be authorized to grant one-third and lend one-third; be so good as to state your opinion as to that proposition to the Committee?—I should say, that assuming the propriety of public contributions towards works in Ireland to be acknowledged, that it could not be better managed than in conjunction with advances from public bodies and private individuals, inasmuch as you will then have an increased capital expended on these very useful undertakings.

1888. Do you consider it proper that the public should be called upon to grant money for the exclusive benefit of individuals, while the return goes immediately to individuals?—I think the profit to individuals of such sums as we should expend for the promotion of public works would be very small in proportion to the benefit derived by the community in general, by the increased employment which it would give to the labouring classes, an object so much wanted; and where, without such assistance, no capitalist will come forward for the execution of the work, I think Government might reasonably aid them. This is not a wholesome state of things, but it is a matter of expediency arising from the peculiar state of Ireland.

1889. Do you think it necessary, in the case of such advances by Government by way of grant, to put a maximum upon the dividends received by the company?—I think it would be reasonable to stipulate for a maximum, allowing it to afford such a fair anticipation of good profit as would induce capitalists to risk their money, such as 10 per cent.

1890. You would then leave a power to the company to relieve themselves of this limit, by repaying the sum granted, in case their profits should allow them to do so?—I would certainly; I would give every encouragement to the advancement of private capital upon public works in Ireland.

1891. Would there be any objection whatever that Government should advance one-third in case the parties did not stipulate for a benefit?—On the contrary, I think it would be a very desirable expenditure, perhaps more so than any other, to aid parties who subscribe without expecting any direct benefit from the works.

1892. When

Col. *J. F. Burgoyne.*

1 June 1835.

1892. When you alluded to the parties, do you mean principally grand juries, or the proprietors of land?—The proprietors of land, yes; I should say not grand juries, because a grand jury assessment is not voluntary, it is a tax; I am alluding to a voluntary contribution.

1893. In your opinion, in cases where more than one-half of the landed proprietors were satisfied, might not the necessary contributions be levied on the whole of the landed proprietors to be so benefited?—That would come in the nature of a tax like a grand jury assessment. I do not think on such a foundation as that, they would be entitled to a free grant.

1894. Do you not think that Government would be disinclined to grant money to advance the interest of individuals?—Certainly, where the individuals do not contribute at all towards it.

1895. And even to those who subscribe, where they take a direct benefit?—Where they take a direct benefit, I think they would.

1896. Might not that objection be removed if Government lent one-third and the parties subscribed one-third, and the remaining one-third to be advanced by Government, without interest, but to be repaid after the loan made by Government was satisfied?—That might be a reasonable mode perhaps of giving Government aid for such works.

1897. In your opinion, they ought not to insist upon that; but you think the grant ought to be free?—I think, in cases of voluntary subscriptions, they might very reasonably make a free grant of an equal amount; but not in the case of any compulsory assessment or tax, or where a direct benefit was contemplated to be derived from the work; if funds could be had to an unlimited degree, you might perhaps go further; but I am supposing that the means are limited.

1898. Do you think it would be desirable that the Kingstown Railway Company should be authorized to make a survey of the proposed line of railway to Valentia?—The Kingstown Railway Company have carried on their own work so remarkably well, that I think the public would have more confidence in any undertaking under their management, than under that of any other body we know of at present.

1899. Are you aware that locomotive engines have gone at a speed of from 15 to 20 miles on common roads?—I think I have gone on one at the rate of 20 miles an hour myself on a common road.

1900. Suppose those carriages were used upon a curb-stone and granite road, and not subject to the interruption of carts and carriages, which occur upon common roads, what speed do you suppose they might be fairly worked at?—Very nearly the speed they go on rail-roads.

1901. If it could be proved that granite or curb-stone roads could be constructed at the rate of from 2,000*l.* to 3,000*l.* a mile, would you, in the present state of the country, recommend an expense of a sum of six and seven times that amount for a railway?—I do not imagine there would be that difference of expense; the levels would be the same, and the stone-work would be the same; the only difference would be the application or not of the iron railway bars.

John Patterson, Esq., called in; and Examined.

J. Patterson, Esq.

1902. ARE you resident in Ireland?—I am; in Dublin.

1903. Are you of any profession?—A Stock Broker and Agent to the Globe Insurance Company.

1904. Do you know the number of acres of arable land in Ireland?—I believe 14,000,000 of statute acres.

1905. Have you been engaged in loans or mortgages in Ireland?—I have, to a very considerable extent.

1906. What is the rate of interest?—There are very few sums lent at four-and-a-half; I think you may take five per cent. as the regular rate of interest in Ireland now.

1907. Can you state what is the general average rate of interest in England and Scotland upon loans and mortgages?—I believe from three-and-a-half to four per cent.

1908. How do you account for the difference of the higher rate of interest in England?—Because I am of opinion Englishmen are afraid of lending their money in Ireland, in consequence of the occasional disturbances, and those disturbances being very much exaggerated in the public newspapers.

1909. What has been the cause of those disturbances?—I am satisfied they all proceed from want of employment for the labouring population.

1910. Do you believe, if the peasantry had sufficient employment, that there would be any disturbance or agitation whatever?—I think in every district where there is sufficient employment for the peasantry there is peace and tranquillity.

1911. How do you propose to employ the people?—I think it may be done in a variety of ways; I consider Government should set the example, by forming roads through districts at present uncultivated, thereby enabling the farmers to bring their produce to market. I particularly allude to Mayo and Kerry.

1912. Has the interest on Irish mortgages, to your knowledge, been punctually paid?—All those negociated by our house have been very punctually paid.

1913. As punctual as in England?—Perfectly so; they are generally guaranteed at the Dublin bankers, and paid there.

1914. To what extent do you propose Government should make advances for public works such as you have mentioned?—I am not prepared to say to what extent; I do not think they can go to a great extent consistently with the authority of the body through whom the money is proposed to be lent.

1915. Might not the money be safely placed at the disposal of the present Board of Works?—I cannot say that; I consider the powers of the Board of Works are so limited that they are not able to carry into operation any great measure of the kind.

1916. Do you think their powers ought to be increased?—Yes, I think they ought to be increased.

1917. In what way would you propose to increase those powers?—I think the Board in Dublin is scarcely able to appropriate money to a great extent through Ireland, and I should suggest that local boards should be appointed in each county by Government with a central board at Dublin, and that the local board should not have power to dispose of the public money till surveys or plans of the different lines, whether roads, canals, bridges or harbours, should be made; and I think that such plans and surveys should be first submitted to the grand jury of each county, and upon receiving their approval the central board in Dublin should at once issue the necessary money; and I conceive that Government would be perfectly justified in advancing money for making roads. It appears in evidence before several commissions, that in the uncultivated districts where money has been advanced for this purpose, the Excise return has produced 50 per cent. on the sum so expended where no Excise ever existed before, particularly in Galway, from whence there is a report from Mr. Nimmo on the subject.

1918. Do you think that money might be usefully laid out by Government for the advancing of public works in Ireland, without the parties seeking direct benefit?—That would depend on the mode of repayment of the money; if done by compulsory enactment, it might happen that one portion of the county might be called upon to repay the expenses, while another portion reaped the benefit of it. I think if done by way of baronial assessment it would be advisable.

1919. At what rate of interest should loans be lent?—I think they ought to be lent at four per cent.

1920. Not lower?—I think that at the present price of Exchequer bills and Consols you may take the value of money at three per cent.; and one per cent. would be required to cover the expenses of the local boards, which I speak of, as they should necessarily be men of high standing and well paid for their services.

1921. If there were not local boards, it would not be necessary that they should be at so high a rate of interest?—No, you might take ½ per cent off.

1922. Do you think there is much unemployed capital in Ireland?—I think there is a great deal; a considerable number of persons have sold out of the funds at a high price, and have kept their money in hand expecting the funds will fall; and from the Parliamentary Returns it appears that there is an immense sum in English stock transferred to Ireland, much greater than is transferred from Ireland to England.

1923. How does it happen that the capital remains so unemployed?—The number of private speculations that have been engaged in, such as the Canal Companies, and the St. Patrick Assurance Company, Mining Companies, &c. have turned out such complete failures, that the Irish public have little confidence in any plan managed by Irishmen exclusively; that does not extend to companies which are managed in London, as for instance, the Provincial Bank of Ireland, now at nearly 100 per cent. premium.

1924. How would you propose to restore that confidence, or to give confidence?—I think if some one great undertaking was achieved in Ireland, and the public saw its success, confidence would be restored.

1925. How would you propose that this great undertaking should be accomplished?—If practicable, by a private company; if impracticable, by Government.

1926. You have alluded to roads and bridges; does not Ireland stand in need also of great improvement in the internal navigation of the country?—I believe it does; I understand that the navigation of the Shannon requires very considerable improvement.

1927. How would you propose the Shannon to be improved?—I think it should be partly done by Government as a national work, but that a certain proportion of the expense should be defrayed by the landed proprietors in its vicinity, by the Internal Steam Navigation Company, and by all other parties who would receive benefit from the improvement.

1928. How are the Government roads, as they are technically called, repaired at present?—By the Board of Works.

1929. Have you any other suggestions to make to the Committee?—I am not aware, except connected with the company for forming tramroads in Ireland.

1930. I think you said you were a stockbroker?—Yes.

1931. How many are there in Dublin?—Fifteen firms altogether.

1932. Are they made stockbrokers in Dublin in the same manner as they are in London?—No, they are quite distinct; they are more select in Dublin than they are in London. The rule in Dublin is, that you have to serve an apprenticeship, and you are ballotted for afterwards.

1933. Then it is a sort of close corporation?—By no means; it is done in order to guard the public from those failures that take place upon the London Stock Exchange.

1934. Supposing a respectable person should be desirous to set up in this line of business; would he be prevented if he was excluded by the ballot?—I know that there is not an instance on record of a man who has served an apprenticeship as a stockbroker ever having been rejected.

1935. How long have you been agent to the Globe Insurance Company?—My father has been agent to the Globe Insurance Company thirty years, and I have been in the office for the last fourteen years.

1936. What extent of business has your company done in Ireland?—We have done business to a great extent; more than any other insurance company in Ireland of the same standing.

1937. Are you much in communication with persons residing in distant districts in Ireland?—We are, as all other stockbrokers are; our number being so few, we are in constant communication with every part of Ireland.

1938. What amount of Exchequer bills do you think the Dublin market would bear in circulation?—I do not think it could bear them to any extent; you could not dispose of more than from 3,000*l.* to 5,000*l.* a day, if so many; Exchequer bills are very little used in Dublin.

1939. Would Exchequer bills issued upon the same terms as here at $1\frac{1}{2}d.$ a day be negociated in Ireland except on a discount?—I do not think they would; the business done on the Stock Exchange at Dublin is so limited, that if money were wanted in a hurry it would be difficult to dispose of Exchequer bills.

1940. Have you been concerned for any English Railway Company?—Yes; for the London and Birmingham.

1941. Have many shares been taken in Ireland?—At the time the company was formed, 500 shares were allotted to Ireland, and they were taken at once.

1942. Have they been in the market since, or have they been held?—They are entirely held by the proprietors who originally took them, and there is an increased anxiety for purchasing more.

1943. Have you any communication to make to the Committee with reference to the formation of tramroads between Waterford and Valentia?—I am concerned for a company formed for the purpose of making tramroads somewhat similar to the Commercial Road in London, from Valentia, or whatever port in the West of Ireland engineers may recommend to Waterford; our company is completed, and we shall be ready to commence operations almost immediately; our engineer has given in this return, which, with the permission of the Committee, I will read.

"Sir,—Agreeably to your request, I have examined the maps of the country between Waterford and Valentia, from which and my knowledge of works in Ireland, I have no hesitation in saying, that a line of road may be formed between these sea-ports, over which locomotive

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locomotive carriages and carts drawn by horses may be employed with the greatest advantage to the country.

"The locomotive carriages will probably travel with passengers at a velocity of 15 to 16 miles an hour, and one horse will be enabled to draw goods, merchandise or farm produce, amounting to four tons, at a velocity of about three miles an hour.

"Such roads will probably be found more advantageous and generally useful in the present state of Ireland than long lines of railroad, as they can be made at one-fourth of the expense of railways, are not easily injured by ill-disposed persons, and can be entirely executed by the labourers of the country.

"On railroads the carrying department must be in the hands of the company constructing the work, as it will be impracticable to run engines belonging to private individuals without every danger of collision.

"The description of road I propose would hold a medium place between railroads and turnpike roads; a considerable velocity might be attained for the passenger trade, and every farmer and landed proprietor might take advantage of it by using their own carts and horses. The company would run the locomotive carriages, and take toll for all carts drawn by horses; the road might be so constructed that no delay or interference could take place in travelling of each description of carriage.

"The expense of a road of this description would not exceed 3,000*l.* per mile in Ireland, supposing the land necessary to be purchased not to exceed 30*l.* per acre.

"Taking the distance from Waterford to Valentia to be 140 miles, the expense of such a road would be about

	£.
30 stations at 100*l.* each	420,000
14 toll-houses, gates, &c. at 50*l.*	3,000
60 locomotive engines at 700*l.*	700
Contingencies	42,000
	42,000
£.	507,700

"I am, Sir, your most obedient,

"*John Macneill*, 2 Parliament-street,

"To John Patterson, Esq., Morley's Hotel. 29th May, 1835."

1944. Has the capital for that company been actually subscribed?—I cannot say it is paid, but it is ready to be paid when the minor details are completed; our shares are all subscribed for to the amount of one million. We have had locomotive engines built and tried here, capable of carrying 30 passengers each; on an ordinary road they have exceeded in speed 18 miles an hour, and on a road where there is an inclination of one in fifteen, they have gone at the rate of eight to ten miles, and it is known from experience that an inclined plane of one in ninety is almost impossible for a locomotive carriage to surmount on a railway; and in the present Session the Western Railway Bill was very nearly thrown out because there was a rise of 1 in 207, whereas on an elevation of one in forty we should be perfectly able to accomplish our object, because we carry a less weight.

1945. Is it Irish capital subscribed?—It is subscribed in London, Dublin and Bristol.

1946. What proportion in Dublin?—Not a very great amount; it is chiefly in London and Bristol.

1947. Have these locomotive engines generally succeeded on the common roads?—The engines I have been speaking of were built by Messrs. Field & Maudesley and Mr. Hancock, and I have been out with them 12 times in various parts of London and its environs; what I have mentioned was then performed.

1948. To what cause do you attribute the circumstance, that the experiment has been made for some years, and never has been carried into practical use?—The persons who have hitherto built the engines have been gentlemen mechanics, and the engineers I speak of who built these particular engines are ready to enter into a contract with us to keep the engines in perfect repair for 1*s.* a mile, and they are ready to be examined on that point.

1949. Would your company, if formed, expect to receive any loan from the Board of Works?—We do not intend to apply for any, but if Government proposed the granting of a large sum for private works, we should ask for it as well as others; we have no intention now of applying for it; we do not require it; we propose to establish this line of tramroad in connexion with the other part of our plan of opening a steam communication between the Western hemisphere and the Western part of Ireland.

1950. Is any considerable part of the capital subscribed at Waterford?—We have reserved a certain number of shares for Waterford, Limerick and Cork, and we have established local boards in those towns; in all those cities the plan has been adopted with the greatest avidity.

John

John Darcy, Esq., called in; and Examined.

1951. I BELIEVE you reside at Clifden?—I do.

1952. Are you proprietor of that town?—I am.

1953. It was built by yourself?—Yes; it was built within the last 20 years.

1954. Is it not on the sea coast?—It is on the Bay of Ardbear, in the county of Galway.

1955. Have you a harbour there?—A very fine harbour; one of the best on the Western coast of Ireland.

1956. Have you a dock or quay there?—The late Mr. Nimmo, when conducting the Government works, commenced a quay, which he left in an unfinished state, to the great injury of the town and surrounding country, as it is the only place from which corn and fish is exported, and to which salt, iron, pitch, tar, hemp, timber, tea, sugar and manufactured goods are imported for that district; the finishing of that quay would be of great importance, as would the removing a few rocks and making a light on the Caragrone Rock.

1957. Is the harbour sufficient for a vessel of tonnage?—It is sufficient for the largest vessel.

1958. What is the nature of the land about the town of Clifden?—It is a mountainous country, but very improvable.

1959. Have you improved much land about the town of Clifden?—For the last 20 years I have resided in that country, and employed my entire time in the improvement of the waste lands in the neighbourhood.

1960. What is the cost per acre of such improvements?—I cannot exactly say; in the first instance, I had a great many difficulties to surmount in consequence of the want of roads and the want of a market for the produce, and I had to expend a large sum of money in the establishment of a town. I should think that lands in that part of the country could now be reclaimed for about 4*l.* an acre upon an average, and in some places less; that is, prepared for manuring and putting down the crop.

1961. What would be the annual value per acre of the land when reclaimed?—I should think the fair rent of it would be from 10*s.* to 15*s.* per acre, according to the convenience of manure.

1962. What was its previous value before its reclamation?—A great part of the lands in that country are of scarcely any value; in some places not more than 1*s.* an acre.

1963. What isthe soil?—It is a boggy soil from three to four feet deep.

1964. What is the sub-soil?—It is a sandy gravelly clay.

1965. Any granite?—Some parts are granite and other parts are clay.

1966. Through the means of the sea-sand, the peasantry, who pay 15*s.* an acre, are enabled to procure such a crop as remunerates them for their labour?—Yes.

1967. Have you any idea of what its elevation is above the sea?—The very steep mountains are not reclaimable; but there is a vast tract of reclaimable land that is not more than 100 feet above the level of the sea.

1968. Are there not in the county of Galway 200,000 acres of that description of land, and in a state almost waste at this moment?—To the west of Galway there are more than 200,000 acres of land lying in that state.

1969. How many have you of your own?—Several thousand.

1970. How many are there in the neighbourhood immediately adjoining your estate?—The entire of the reclaimable district I alluded to is in the neighbourhood, and adjoins my estate.

1971. With reference to almost every part of that tract of land, do the facilities with respect to sea manure and lime exist?—The country is so indented by the sea, that the remotest part is not more than six miles from it. If therefore there were roads, the facilities would exist to every part.

1972. Have not Government made a considerable length of road in that district?—They have commenced several, none of which are as yet complete.

1973. Have not those roads remained for several years with one part finished and the other utterly impassable?—They have.

1974. How long have they been left in that state?—They commenced in the year 1822, and are yet unfinished.

1975. Then there is but one passable?—Not throughout.

1976. Has not the improvement in that part of the country been very great?—Yes, the improvement of that country has been very great within the last ten or

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twelve years; for instance, where you could scarcely get a stone of oats in 1822, from the quantity of waste land brought into cultivation, there was exported from the town of Clifden this year 800 tons to London and Liverpool.

1977. To what do you attribute the increase of cultivation?—Partly to the building of the town, and partly to the outlay of money on the roads, and the facilities afforded by them even in their imperfect state.

1978. Were oats grown in that country before?—Very little corn was grown in that country prior to the building of the town, there being no market for it.

1979. Do you think it would be desirable that the proprietors of that district, in common with the proprietors similarly circumstanced, should have the power, under proper checks, of charging their estates with a certain proportion of the money which is laid out in reclaiming and improving the districts?—I think they should have a power of charging the reclaimed land with the money expended in improving it.

1980. What difficulties do you find now chiefly obstruct the reclamation of this very large tract of land?—I think there are two difficulties: in the first place, the proprietors have not capital to expend upon it themselves, and, in the next place, a difficulty exists in making leases of these improvable tracts, in consequence of the state of the law.

1981. Has any mode occurred to you, by which the rights of the creditors could be fairly protected and guaranteed, and at the same time the proprietors would be at liberty to make that arrangement with respect to their estates, which would lead to their ultimate reclamation and improvement?—In the first place, where I am certain the expenditure of capital would raise the value of the land so considerably, I think it would be beneficial to the creditor and to the remainder-man that the waste lands should be reclaimed. If the Government would advance a sum of money to be expended under the direction of the Board of Works, the interest of which to be the first charge on the lands so reclaimed, landlords would take advantage of it and give employment to numbers now in need of it, and the creditor would have the same remedy against the improved land he has now against the waste.

1982. Do you attribute the great increase in the improvement of agriculture in your immediate neighbourhood to the making of roads?—Partly to the making of roads, and partly to the building of the town, which created a market.

1983. You have said there are about 200,000 acres in Connemara capable of being reclaimed, and being made worth at least 10*s.* an acre?—I consider there are.

1984. What amount expended in roads would give a return of 100,000*l.* a year?—I do not mean to say that roads alone would do it, unless capital was expended in draining and improving the land, though without roads the land could not be improved.

1985. What amount of money laid out in roads in that district would enable the proprietors and tenants to make these improvements?—I should say at least 20,000*l.*, in that immediate district; I cannot exactly say.

1986. And at present you think there are no parties who have the power of laying out that 20,000*l.* which is neccessary?—I am sure there are not.

1987. Would they not cheerfully contribute one-half of the expenditure, or are they incapable of doing even that?—I think it would be unreasonable to require it.

1988. Would not the tenants themselves be very happy to contribute?—The tenants are very few in proportion to the great extent of land; these improvable districts are not, at present, tenanted at all.

1989. Is not the population of those districts extremely small?—It is thick immediately on the sea coast, but the interior is without any population.

1990. In reference to the area of the district, it is small?—It is very small: a mile from the sea in some places there is no population.

1991. If the land was in a state of reclamation it would give employment and subsistence to many thousands more than at present inhabit it?—It would, and relieve hundreds of distressed families who went into that country from different parts of Ireland in expectation of being employed on the public works, and who are at this moment in a state of starvation in consequence of the failure of the potatoe crop last season.

1992. And relieve those parts of the kingdom in which there is a surplus population?—It would relieve those parts of the kingdom to a very considerable extent.

1993. You spoke of the Connemara district; I understood you to state, that the proprietors

proprietors have so mortgaged or encumbered the ground with debt that they could not raise 20,000*l.* easily?—I did not say the proprietors had so encumbered the land; they could not; but it would be unreasonable to require them to lay out so large a sum on public roads where they would not be exclusively benefited by them.

1994. Do you think it would be of advantage to the country that the sum of 20,000*l.* should be advanced there, when it would be merely for the private advantage of four or five people?—I consider it would be for the benefit of the public at large to bring 200,000 acres of unprofitable land into cultivation, thereby affording employment for thousands of destitute poor; it would also tend considerably to the increase of the revenue; that part of the country did not produce 1*s.* to the revenue 20 years ago, and the revenue of the town of Clifden alone is at this moment 7,000*l.* a year; in the year 1828 it was represented by Mr. Nimmo in his Report to Parliament as 5,000*l.*; it has been raised since to upwards of 7,000*l.*

1995. It has been suggested to the Committee that where Government are called upon to make grants for roads through wild districts, such as Connemara, the proprietors might be fairly called upon to give up to the Crown a certain proportion of acres of land; would the proprietors of the Connemara district, in consideration of any grants of public money for the purpose of making roads, which would tend to the improvement of their estates, be willing to give up any portion of their estates?—I would.

1996. Would you consider that to be fair?—Yes; I cannot speak for other proprietors, but I would contribute a portion.

1997. If there was a main line of road made through the district, would the proprietors be able to make roads that would join it so as to be useful?—I think if the main lines were completed, the inhabitants of the barony would make some private roads, by getting a loan of money, and paying the interest and principal by small instalments. The principal roads they are unable to make.

1998. Do you suppose that the 20,000*l.* should be for the purpose of making a main line of road or roads from farm to farm?—I mean that it should be for making the principal lines of road.

1999. Can you suggest any principal lines of road which you would recommend to be made?—In addition to some of those laid out by Mr. Nimmo, I think a road along the coast from Clifden to Clegan Bay, a distance of about 10 miles, of the first importance, both as to the improvement of the country and the convenience of the fishery. There is also a road much wanted from Renvile by the coast to the Killery Bay. A presentation was granted about a year ago for making a new line of road from Clifden to Sline Head and Bunown Bay, in expectation of getting a moiety from the Board of Works; no progress has been yet made in executing this road. I commenced a road from Balleneboy to Lethrobe some years ago, which would afford great advantages to that district, and which has not been executed.

2000. Is there not a new road there already?—There is a road in progress from Clifden to Westport, but it leaves a large portion of the country that it does not touch; I also think the opening of that country would have another advantage in the encouragement of the fisheries on that coast, which would tend to employ a great number of people.

2001. In what way do you think the fisheries on that coast would be fostered and increased by an Act of the Legislature?—I cannot well say, but I think they never will be properly attended to but by a company; the establishment of a company is the only way it can ever be done; the coast is so wild, and the fishing banks are so far to sea, that it requires vessels of a good size to fish upon it.

2002. Is there a very great quantity of fish upon that shore?—A very great quantity, and very often vessels from the Skerries near Dublin, and from other places, come to fish there. But the people of the country have such small boats that they are able to derive but very little advantage from it.

2003. Do you find that English capitalists are informed of what great resources at present exist in the way of fisheries, from which as yet the public has derived little benefit?—There have not been lately any exertions made to acquaint them of it, but some years ago a company was spoken of, and I understood at that time a number of persons were ready to take shares in it.

2004. Would you think it desirable that a commission should be appointed for the purpose of inquiring into the whole establishment of the fisheries and the fishery law?—I do indeed; I do not know any thing of more consequence to Ireland than the encouragement of the fisheries on the coast; from my own knowledge of the fishing bank off the western coast of Galway, I can confidently state, that capital

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could not be more advantageously employed, and the result of a commission would be to satisfy the Government and public of that fact.

2005. Are not a considerable number already employed in that district in the fisheries?—They are occasionally employed, but being farmers as well as fishermen, nothing is properly attended to.

2006. What sort of boats are they?—The boats for the herring fishery are not above 15 or 16 feet keel, and there are a very few small sailing boats of about four or five tons.

2007. Do they cure any fish for export?—They do, a quantity of herrings.

2008. For fresh fish, is not Galway the only market?—Galway, Clifden and West Port.

2009. Is there not a fishing bank not far from the coast of Connemara?—There are considerable fishing banks about ten leagues to the west of Sline Head and Achil Head.

2010. Are the fishermen with their boats able to reach that bank?—Very seldom.

2011. Has any capital been subscribed for forming an establishment for carrying on the fishery along the coast?—No.

2012. To what circumstance do you attribute the capital not having taken that direction?—The country and the capabilities have been heretofore unknown; except that, I do not know any other.

2013. When you first went to reside in that country, how many houses were there in the village of Clifden?—Only one.

2014. How many are there now?—Upwards of 300.

2015. How many years ago is it since you went there?—Twenty years ago, in the year 1815.

2016. Was there any revenue receivable from Clifden or its neighbourhood at that time?—Not a shilling.

2017. Can you state the amount of revenue received last year?—Upwards of 7,000*l.*

2018. Does illicit distillation still prevail in Connemara?—It does not; there is a party of revenue police who are very active to prevent it.

2019. Are they sufficient to put it down?—They are.

2020. Previous to the formation of roads, was there much illicit distillation at Connemara?—There was a great deal.

2021. If the country was more open by roads, would it be necessary to keep up so large a police for the purpose of suppressing illicit distillation?—It would not.

2022. Can you state to the Committee the expense of the police force?—I cannot.

2023. Have you any suggestions to make to the Committee respecting the improvement of that part of the country?—I should recommend that a sufficient number of civil engineers should be employed by the present Board of Works in Ireland, to enable them to superintend the making of the principal roads through the waste districts, to finish the quays and piers already begun, and to construct such others as are necessary for the encouragement of the fisheries on the western coast, the expense of which to be paid by a Parliamentary grant; and I would recommend, that the Board should have the power of advancing money to proprietors for the purpose of reclaiming waste lands, making roads, working quarries, on the security of the improved lands; these works to be laid out and executed under their direction. I would also place the county surveyors under the control and direction of the Board of Works; allowing any advance of money to be secured on the land as the first charge.

2024. Suppose a land company were formed, with the power to purchase wild districts, under the provision that the purchase money should be applied to the trusts of the estate under settlement, or the discharge of incumbrances; do you think the proprietors of that district would be willing to lease for ever or to sell to such a company any considerable tract of land?—I really do not think they would, to any great extent.

2025. To the extent of 10,000 acres?—I think 1,000 acres would be hardly worth a company's undertaking.

2026. Would it be of great advantage to Connemara that a company possessing capital should purchase considerable tracts of land?—It would be of great advantage to the country in general, and every proprietor in it, that money should be expended in improving any part of it.

2027. You talk of expending 4*l.* an acre upon the improvement of land; in what state would that leave it?—It would leave it fit for manuring and sowing a crop in it.

2028. And in cultivation afterwards, would it require a greater outlay than in common farming?—I think not.

2029. Would that 4*l.* cover the expenditure for manure upon the land?—It would not manure it.

2030. Are you aware that in the county of Clare, the same estates which adjoin the sea, under entirely the same circumstances as the great part of the district of which you have spoken, the rent of from 30*s.* to two guineas an acre is paid by the tenantry, in consequence of the great benefit found to arise from manuring the land by sea sand?—I am aware of it.

2031. Is not a crop of oats in Connemara highly valuable?—Yes, they are very fine oats.

2032. Does it bear a high price in the London market?—I have been told by a merchant who has got a cargo from Clifden, that it bore a higher price than any other oats in the London market.

Pierce Mahony, Esq. called in; and further Examined.

2033. HAVE you any thing to suggest to the Committee respecting the power of leasing which might be advantageously given to the landlords of Ireland?—I have been present while Mr. Darcy has been under examination; and having professional knowledge of Mr. Darcy's case, as well as that of Mr. Martin of Galway, I think it right to state, that the legal difficulties referred to by Mr. Darcy prevented the expenditure of a large sum of money in the working the quarries of those gentlemen in Connemara. The Hibernian Mining Company would have worked them ever since 1825, but that I could not report a safe and perfectly safe title, freed from incumbrances, had been made out. This defect arose from settlements and incumbrances riding over the entire estates. The suggestion I should make, with a view to remedy such defects, is, that the creditor or remainder-man should only be entitled to the rent or royalty reserved by the landlord, and should not have the power of disturbing the possession of the tenant; and the same rule might apply to all leases made at the full improved value; and thus security would be afforded to the tenant for the capital which he may expend in the improvement of the estate, and that too without detriment to the creditor or to the inheritor. The effect of my proposition would be, to give the tenant who originally contracted to pay the full value of the lands or royalties leased to him, a quiet possession as against incumbrancers and remainder-men to the extent of the increased value of the property arising from his (the tenant's) capital and skill. The creditor's right to recover the rent reserved from the tenant would still remain, but the possession of the tenant so long as he pays the reserved rent would be protected.

2034. Is not your plan equivalent to giving a power to the landlord to lease without the privity or consent of the incumbrancer?—Yes, it may have that effect; but if the incumbrancer will not look after the estate and go into possession of it, and that he leaves the management to his creditor, his latent rights ought not to impede the due management of the estate. I propose to give the proprietor or the creditor in possession power to lease at the most improved rent which could be had, but without receiving any pecuniary premium or fine.

2035. How would you guard such leasing power against the possibility of the proprietor's taking fines?—In the same way as the remainder-men are now protected against the acts of the tenant for life under the ordinary leasing power, which is given on the express condition that the leases shall be made without fines at the most improved rent and for a limited period; the question then becomes a jury question, and so it would be in the case of incumbrancers.

2036. Is it not a violation of the contract between mortgagor and mortgagee?—Literally speaking it may be so, but it is not so in reality; the mortgagee has the legal estate vested in him, and the right of the mortgagor is but an equitable one upon payment of the incumbrance. I do not consider that the adoption of the suggestion I make could in 999 cases out of 1,000 affect the real and substantial interests of the creditor. I make the suggestion with a view to increase the prosperity of the country generally, and the consequent increase of security to the creditor, by removing legal impediments which now prevent tenants improving their

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lands or working mines and quarries. I know the difficulties, and therefore desire to secure the tenant's possession; if that be done, many adventures will be made which are now checked by the very possibility of the tenant's possession being disturbed. Capitalists will not be satisfied with mere possession; they must be secured against every possible risk of disturbance before they can be induced to risk their capital.

2037. Has any thing been done with respect to the *custodiam* process which is complained of in Ireland?—Neither that or many other recommendations made by the Law Commissioners have been attended to. The *custodiam* process is a great evil; the successive Governments from 1823 have promised that it should be remedied; they have also promised that the office of sheriff should be regulated; but notwithstanding those promises, these defects of our legal system, besides many others, such as the Bankrupt Law, &c. remain unattended to.

2038. Does emigration to any extent take place from Ireland to America at this moment?—To a considerable extent; but the disastrous losses from the ports of Limerick and Cork within the last two years have materially checked the tide of emigration.

2039. Do you think emigration beneficial?—Most certainly; and if we are to have some modified provision for the poor in Ireland, unaccompanied by emigration and public works to a considerable extent, we shall find any poor law system, no matter how modified in degree, a most intolerable burden, instead of being, as I hope it will become, a blessing to Ireland.

2040. Have you any thing else to suggest to the Committee?—With regard to emigration, I should wish to state, that there is at present a plan before the Government for the formation of a society to aid emigration from Ireland; it was submitted to-day to Lord Glenelg, by a deputation headed by Lord Fitzwilliam and others, and a Bill is now before the House of Commons to carry it into effect.

2041. Does distress prevail in many parts of Ireland at this moment?—From letters which I have received from Ireland, and other letters which I have seen, it appears that there is very great distress; there is almost a famine in parts of the counties of Kerry, Mayo, Galway and Cork; even on the Crown lands in the county of Cork, I find, by letters I have seen, that it is scarcely possible (even with abundant means in money) to get provisions for the labourers on that estate: and at Killarney, the price of potatoes is 6*d.* per stone, which we consider to be a famine price.

2042. When potatoes are at 6*d.* per stone, are not the Irish people generally compelled to live on one meal a day?—They must: if you take the average wages for the whole year, we find that the labourer does not get more than 5*d.* a day to support himself and his family; consequently, if the price of potatoes is 6*d.* a stone, it becomes a famine price.

2043. Has he on many occasions to let his strip of land, which yields him a quantity of provisions, at a rate somewhat less than to purchase in the market?—That condition depends upon the season; if the potatoe crop is a failure, he loses the advantage he hoped for from his garden supply.

2044. Do you think the working classes are as well fed now as they were ten years ago?—Generally speaking, far better.

2045. Does not Ireland export more pigs and cattle and grain than she formerly did?—Certainly; and more are produced in consequence of the increased facilities for their export.

2046. Has not the agriculture of Ireland greatly increased within the last ten or fifteen years?—Certainly.

2047. Have not extensive tracts of country been cultivated which were formerly waste?—Certainly. I visited the districts through which the Wellesley and Anglesey roads have been made last September; I had not seen that district from the time they were commenced, and I was astonished at the increased quantity of land taken into cultivation since their formation. If I had entertained any doubt before as to the propriety of opening roads in such districts, my visit to the South of Ireland last September would have completely removed them.

2048. You think the neighbourhood of the Wellesley and Anglesey roads presents an astonishing contrast with the present situation of Connemara, as described by Mr. Darcy?—Certainly.

2049. If there were lines of road through that uncultivated tract of country at Connemara, do you not think that the condition of Connemara would be different

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to what it is at present?—Certainly, the more we open those districts by roads, canals and railways, the greater will be the sum of general wealth in Ireland. *Pierce Mahony*, Esq. 1 June 1835.

2050. I believe you are the solicitor to the Kingstown Railway Company?—Yes; I have been so from its commencement.

2051. Has your attention been at all called to the beneficial effects that might arise from railroads in general in Ireland?—From almost the commencement of that work, it has been the conviction of those who took the lead in it, that so soon as the Kingstown Railway had proved a successful project, it would lead to the general extension of the railway system through Ireland; and more than two years since, at a meeting of several gentlemen interested in that project, which was held at my chambers in Trafalgar-square, for the purpose of deciding on the best principle on which the extension should proceed, it was agreed, that so soon as the Kingstown railway fulfilled our expectations, that arrangements should be made for its extension from Dublin, towards the South and West of Ireland, by a great trunk or arterial line, having for its object a general system of accommodation to the district through which it passed, without peculiar regard to the several towns, as we considered it a matter of certainty that those towns would take their respective branch roads towards such a trunk line to the capital and the sea coast.

When the Kingstown railway had proved a successful work, it was determined to make a survey of such a new line, and Mr. Cubitt was spoken to on the subject. He then suggested that we ought to bear in mind some ultimate *terminus*, with a view to command the greatest amount of national interest and advantage, and that *terminus* he recommended should be the harbour of Valentia, as the best and most western in Europe. I give in now to the Committee, the first sketch of the Plan which he furnished to me. I also hand in a Chart of that harbour, which proves its advantages above all other harbours on that coast.

PLAN for the Amelioration of the South and South-west of *Ireland*, and for the Improvement of the Communication between *London* and *America*, the *West Indies*, the *Mediterranean*, &c.

THE best mode of improving the South and South-west of Ireland, and bringing it into more intimate connexion with England, would be by making the most perfect line of railroad possible from Kingstown Harbour to Valentia, making the latter the out-port and post-office packet station for the Canadas, the United States, West Indies, Spain, Portugal and the Mediterranean; thus getting entirely clear of the chops of the Channel, and all delays and difficulties attendant thereupon, and bringing the most south-western point of the United Kingdom within 50 hours' distance from London in all seasons *viâ* Holyhead and Kingstown, as the shortest sea passage, or *viâ* Liverpool for those who may prefer that route.

That such railway should be carried in such direction as would make it the most perfect as a main trunk line, without particular regard to the towns or places in its route, which could all branch in as circumstances might require, and which would most probably comprehend all the principal towns in the counties of Cork, Kerry, Limerick, Tipperary, Kilkenny, Queen's, Carlow and Kildare, and thus bring a district nearly 200 miles long and from 40 to 50 miles wide into direct communication with the capitals of Dublin and London, and all parts of the North of England.

If a plan of this kind could be carried into effect, it would more conduce to the benefit of every class of inhabitants of the district through which it passes, and be of more utility to the public service as regards the transmission of troops and despatches to and from foreign countries, than it is presumed any other at the same probable cost could possibly effect; and is therefore well deserving of the serious attention of every well-wisher to Ireland.

P. Mahony, Esq. *W. C.*, 3d April 1835.

I understand Mr. Pim has given in to the Committee the Resolutions agreed to within this month by the directors of the Dublin and Kingstown Railway, and under which it is intended to prosecute that inquiry; and finding so many concurrent testimonies in favour of the line to Valentia, there is no doubt that almost immediately Mr. Cubitt will be instructed to make a survey, and should that line be ultimately found the best for the South of Ireland generally, I expect that it will be adopted, and I know of no place which embodies within itself so many national objects, or so calculated to promote the general interests of the Empire. It has not been taken up hastily, nor will it be followed without giving it due deliberation. The Resolutions I allude to are of the 15th May. But this project is not confined to my immediate circle; it has been discussed in America last December, and the identical plan is laid down in a pamphlet by Mr. Cobden, of Manchester, lately

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published by Messrs. Ridgway & Sons, of London, and entitled "England, Ireland and America." I beg to read the following extract:

We will here introduce a scheme to the notice of our readers, which, whilst we gladly acknowledge with gratitude the source from whence it originated, we think deserves the notice of our Government.

In the New York Courier and Enquirer Newspaper of December 24th, 1834, appeared a letter, headed, "Traverse Atlantic," which, after stating that the writer, on a recent visit to Europe, had suffered a delay of ten days in ascending the French Channel from Finisterre to Havre, and of eight days in descending the Irish Channel from Liverpool to Cape Clear, says, he "believes that, on an average, one-third or one-fourth of the time is wasted upon every Transatlantic voyage, in getting into or out of the European ports now resorted to." The writer then proceeds as follows:

"The commerce of America chiefly centres in the ports of Hamburgh, Havre, London and Liverpool. Each of these is distant from the ocean and difficult of access. On the western coast of Ireland there are several harbours far superior in every requisite. As, for instance, the island of Valentia, which is the nearest point of land in Europe to America. Between it and the main reposes an excellent receptacle for shipping of any burthen, approached by two easily practicable inlets, completely land-locked, capacious and safe. Situated immediately on the brim of the Atlantic, a perfectly straight line can be drawn from this harbour to the port of New York, the intervening transit unobstructed by islands, rocks or shoals. The distance, being less than 2,700 miles, may be traversed by steam in about eight days; and the well-known enterprise of the American merchants renders it unnecessary for me to do more than to intimate, that they will avail themselves of every opening or inducement that may arise to establish the first link of intercourse by a line of packet boats.

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"The extent of this undertaking has been stated as beyond the means of those likely to engage in it. This seems to me incredible, when I advert to the facts, that Ireland has a population of eight millions; multitudes of them are in beggary for want of work, with wages at from 4*d.* to 1 *s.* a day, and money, on the average, not worth more than three per cent., and recollect at the same time, that the state of South Carolina, one of the smallest in the American confederation, with a population of 300,000, wages at 5*s.* sterling a day, and capital at seven per cent. interest, has, unaided and by private enterprise, constructed a railroad from Charlestown to Augusta, 145 miles in extent, at present the longest in the world, which is travelled with locomotive engines in the course of ten hours.

"The advantages to accrue to Ireland in particular, by thus opening a regular communication from New York to London in 12, and to Paris in 15 days, are incalculable. That island would become, of necessity, the thoroughfare between the two hemispheres; and the occupation of the public mind in such an enterprise, and the constantly increasing fruits of its progress, would do more to pacify the fearful dissensions of the people and ameliorate their most lamentable condition, than any legislation of even the best disposed Parliament."

The above project which, in the affluence of their enterprise, our American friends have suggested for the benefit of Ireland, merits the attention of the landowners and patriots concerned for the welfare of her people.

* June 1819, a steam ship crossed the Atlantic from Savannah to Liverpool.

It has long been decided, by the merchants and nautical men engaged in the intercourse between Liverpool and America, that steam boats* would be found capable of navigating the Atlantic with perfect safety, and the more sanguine amongst those interested in increasing the facilities of communication with the two countries, have gone so far as to predict, that in a dozen years' time we may hope to witness the arrival and departure of steamers twice a week between England and the United States.

As any scheme of this nature must necessarily require that the vessels take their departure from the nearest points of approximation of the two hemispheres, Ireland would thus become the starting place for all Europe; and it is scarcely possible to conceive any thing that would be more calculated to enrich and civilize that country, than by thus irrigating it, as it were, with the constant tide of emigration to and from America.

A railway for the purpose here alluded to would pass through the centres of Leinster and Munster, intersecting the counties of Kildare, Queen's County, Tipperary, Kilkenny, Limerick, Cork and Kerry, and would pass within 20 miles of the port of Limerick, and 30 miles from that of Cork, to both of which cities it might reasonably be expected that branches would be carried by public subscription; thus not only would these two great commercial havens be connected with Dublin, but, by opening a direct communication with each other, it would afford a medium for traffic by steam, between the 15 counties that are washed by that noble stream the Shannon and the ports of Cork and Bristol, and ultimately, by means of the Great Western Railway, with London.

Railroads are already begun for connecting Liverpool with Southampton by way of Birmingham and London. The French have long been engaged in making surveys for a railway from Havre by way of Rouen (the Manchester of France) to Paris, and although characteristic delays may arise to retard the completion of this as of other projects of more usefulness with that fanciful people, yet as it is perhaps the only line in all France that would prove a remunerating speculation, there can be no doubt that it will be the first that is undertaken in that country.

Presuming this to be effected, then, by means of such a plan as is here recommended; for constructing a line from Dublin to the extreme point of Munster, a traveller would be enabled to transport himself from the French metropolis, *viâ* Havre, Southampton, London, Liverpool

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Liverpool and Dublin to Valentia Island, or any other point of embarkation, on that coast, in about 60 hours, and as the voyage to New York would be accomplished in about 11 or 12 days, the whole distance from Paris to America, which now upon an average occupies 40 days in the passage, would be accomplished by the agency of steam in about a third of that time.

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That such a project, if completed, would secure the preference of voyagers to all parts of North America, not only from Britain, but from every quarter of Europe, must be apparent. That all we have recommended is perfectly practicable, we have no difficulty in believing; and that a traffic of such magnitude as is here contemplated, would have the effect of imparting wealth and civilization to the country through which it passed, all experience proves to be unquestionable.

But it is not merely the future benefit that must accrue to Ireland from the construction of a railroad through her provinces, that we should alone regard. The present support of her unemployed peasantry is another cogent motive for some such undertakings, for unless a diversion of the surplus labour from the land be effected, through the employment of English capital amongst its population, no change can be attempted in the agricultural economy of Ireland. There is not absolutely, in the present densely crowded state of her rural inhabitants, elbow room, so to speak, sufficient for re-adjusting their position. Yet there are reforms indispensably requisite to the agricultural prosperity of the island. The farming implements of its people are, for example, notoriously inferior, requiring twice the labour both of men and cattle, of our own; yet how shall we hope to see any improvements effected in these, by which the demand for labour shall be temporarily diminished, whilst one-half of the peasantry is perishing for want of work.

And again I find, that in 1833, a steam-packet intercourse from Valentia to America was recommended by Mr. M'Gregor, in his work on British America, vol. ii. page 561. He writes thus:—

CHAP. III.—REMARKS on INTERCOLONIAL and TRANSATLANTIC STEAM NAVIGATION.

THE mutual advantages which one country derives from another, increase in value and magnitude according to the increased facility of mutual intercourse and transportation. This fact is so well established by experience, as to become an evident truism, and that all important places between which an intercourse by steam navigation is established, derive, in consequence, vast mutual benefits, is also a fact equally evident.

When a communication is opened with a country that will enable us to visit it in a certain given period of time, the intercourse is increased in the same ratio as the certainty of arriving at, or returning from that country, more speedily, is greater than by any previous mode of conveyance.

In the same ratio, according to this rule, does the interchanging of the commodities of different countries increase; consequently the prosperity of the inhabitants is advanced, by affording them more plentiful resources, and the political value of such countries equally augmented by increasing general industry and commerce. For when the means of receiving intelligence from and visiting distant countries are rendered certain and speedy, mutual transactions and adventurous undertakings are entered into with much greater faith and spirit, than when the intercourse depends on the uncertain length of voyages, subject to the direction of winds and currents, and to the duration or frequency of calms.

These considerations apply most forcibly to the amazingly vast advantages that would inevitably attend the establishment of a line of Transatlantic steam packets; not only as respects His Majesty's empire in North America, but also as regards the United Kingdom, and particularly as bearing on the great movements of emigration.

If we are secure in former conclusions according to the experience of the last 15 years, we are also safe in saying that steam is the power which will supplant all others in the magnitude and rapidity of its operations. Although we may not be quite so sanguine as to expect making a voyage by steam from Birmingham, Manchester and Liverpool (with a cargo of cutlery, printed cottons and crockery) across the Atlantic, and then up the rivers and lakes of the St. Lawrence, and over the Rocky Mountains to the Pacific and China,—an undertaking far from being impossible,—yet steam is the mighty giant that Great Britain can send forth to bring her possessions in America and the West Indies within half the distance, morally speaking, that they now are to Europe. It is this giant that may enable England to grasp more effectually the vast resources of her maritime colonies, and those of the Canadas, and west of the great lakes, those of the regions of Athabasca and Assinboins.

Since the establishment of steam navigation along the coasts of Great Britain, and between England and the Continent, and particularly between England, Scotland and Ireland, the consequent advantages are too well known and too justly appreciated to be questioned.

If we visit the United States, we find all their coasts and rivers navigated by innumerable steam vessels. There are more than 300 navigating the Mississippi and the Ohio. The magnificence of the steam vessels on the Hudson is not surpassed, if equalled, in Europe; they are in fact splendid floating moveable hotels. A few years ago, small sloops, bateaux and canoes, were the only vessels that navigated the St. Lawrence between Quebec and Montreal, and British manufactures were usually sold from 20 to 40 per cent. higher at the latter than at the former place. At present there are 10 or 12 powerful

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steam vessels, equal in beauty, swiftness and magnitude, and superior in accommodations for passengers to our steam ships in these kingdoms, plying between Quebec and Montreal, and commodities are in consequence now purchased at equal prices at both places. It is not long since the ferry from Montreal to La Prairie, the usual route to the United States, was crossed in a wooden canoe. Passengers, horses and carriages are at present carried over in spacious and beautiful steam boats. The Ottawa and the Lakes of Canada are also navigated by steam vessels. A steam ship, the Royal William, of about 1,200 tons, belonging to the St. Lawrence Steam Navigation Company, navigates the seas between Halifax and Quebec, touching at the points marked in the general map. There are two steam boats belonging to the General Mining Company at Pictou; there is another employed at Halifax and three at St. John's, New Brunswick, one of which goes daily between that city and Fredericton; another crosses to Annapolis, from which stage coaches run to Halifax, and a third plies between St. John's, St. Andrew's and the United States. All this has been done in a few years, and as certainly as the population of our colonies will increase, so will also the number of vessels propelled by steam power.

A company was formed in London, under an Act of Parliament in 1825, for the purpose of navigating the Atlantic with steam packets. In 1826, a great number of the share-holders of that year either withdrew or sold out. The fine steam ship they purchased was also sold, and bought by the Dutch Government, who employed it successfully between Holland and Curaçoa.

Nothing further has been effected, and all the exertions of the intelligent and spirited directors have been unsuccessful; yet nothing but the general ignorance which prevails in these kingdoms respecting British America and the seas of the Atlantic, could have retarded the progress of a company, incorporated with such privileges and with such reasonable prospects of success.

As to the dangers of the Atlantic, they are far from being so formidable as people generally imagine. It has been my fate to have crossed that ocean several times, at all seasons of the year, and sometimes during the most tempestuous weather; and I feel perfectly safe in saying that the sea, in the Irish or English Channel, or in the Gulf and River of St. Lawrence, or even in Lake Ontario, is much more dangerous for steam ships to navigate during stormy weather, than that of the main ocean.

In December 1825 I left the Gulf of St. Lawrence on board of a merchant ship; the weather was so tempestuous that the top-sails were close-reefed half the passage, and in 15 days we were safely at anchor in the Cove of Cork. I left Cork in January for Liverpool, in a steam ship, commanded by an experienced officer, who was for some time on board of one of our ships of war on Lake Ontario. We were in the Channel during a very heavy gale, and a more abrupt difficult sea for a ship to plough through, I never witnessed. The long high swell of the Atlantic, which I had just crossed in such bad weather was nothing to it, yet the steam ship worked over it with amazing ease. The commander agreed with me in considering it much more dangerous than that of the ocean, and that the sea on Lake Ontario, or on the St. Lawrence, was also more difficult for steam vessels than that of the Atlantic.

The commander of one of the steam packets that ply between Dublin and Liverpool, has crossed the Atlantic more than 30 times. I have been over with him as passenger several times to Dublin, and twice, during winter, he declared to me that he never witnessed worse weather, nor such an abrupt dangerous sea, on the Atlantic, as we then experienced. I believe most naval officers will bear me out in these observations. Masters of merchant ships, few of whom know much either of the arts or sciences, cherish a strong prejudice against steam vessels; yet they readily admit that the sea rises more dangerously during tempestuous weather in the Irish and English Channels, in the German Ocean, and in the Gulf and River of St. Lawrence than it does in the Atlantic. Those seas are however all safely navigated with steam ships; and why not cross the Atlantic also by the power of steam?

The Legislatures of all the North American Colonies voted certain sums to encourage intercolonial steam navigation. The House of Assembly of Lower Canada voted 3,000*l.* to persons or companies who would cause a steam vessel to be regularly navigated between the ports of St. Lawrence and Halifax for four years. The House of Assembly of Nova Scotia voted 1,500*l.* to encourage the same object. The Assembly of New Brunswick voted 200*l.* the first year, and 100*l.* each for two succeeding years, provided that the steam packets should touch at Miramichi, and the Legislature of Prince Edward Island voted also a sum on similar conditions.

There is good reason to believe that if Transatlantic steam ships were established, the colonial legislatures would grant sums in aid of an undertaking which promises such great advantages and benefits. If the postmaster-general were applied to, it is also reasonable to suppose that he would direct contracts to be made for the steam ships which navigated the Atlantic to carry the mails, in preference to their being conveyed by the dangerous uncomfortable packets that sail at present between Falmouth and Halifax.

The excellent coal which abounds in Cape Breton and Nova Scotia is not only admirably adapted for the furnaces of steam engines, but it affords an advantage which the United States do not at present possess. This coal has lately been carried for the use of steam vessels to New York and some other places.

2052. Is there any other line of railway that occurs to you that would be advantageous to make in Ireland besides the one you refer to?—Many lines of railway may prove highly beneficial, but no line of railway would afford the same extent of general accommodation to the great interests of the Empire, England and Scotland as well as Ireland. It would lead for a part of its distance to Galway, to Limerick, to Waterford, to Killarney, to Carlow and Cork, and ultimately to the best packet station for the three countries at Valentia Harbour, and thus be productive of great commercial advantages, not merely to England, Ireland and Scotland, but to Europe and the continent of America.

2053. Would not a ship canal from the West coast of Ireland, following the tract of the Grand Canal, as far as it is made, be much cheaper and equally beneficial to the country?—I do not think so, for canals cannot successfully compete with railways when expedition is the object desired, as in the conveyance of passengers, mails and valuable manufactured goods.

2054. Supposing a road of granite can be formed at one-fifth of the railroads, on which locomotive engines can go at the rate of 15 or 20 miles an hour, would you advise your friends to take shares in the railway?—If it was proved to me that one was better than the other, I should select the best, but from the information received on this subject from engineers, I more than doubt the success of such a plan as that suggested by the last question.

2055. Have you ever been in one of these locomotive engines on the common road, and at what speed have you gone?—I travelled about a week or ten days ago for a few miles in a carriage drawn by such a locomotive. It was built by Mr. Field. It afforded me great pleasure; I went as quickly on the common road as I thought consistent with safety; I was astonished at the triumph of science which that engine exhibited, but I have since heard that the succeeding trial was not quite so successful as the one which I witnessed.

2056. At what rate did you go?—I was told that I went part of the time at the rate of 16 miles an hour.

2057. Was it on the common road?—On the Kennington road.

2058. As you have been professionally concerned for both landlords and incumbrancers in Ireland, do you consider it would be to the advantage of both to give greater powers than at present exist for riding over settlements in cases where land is at present waste, or only cultivated to a very limited extent?—I think that powers should be given where *bonâ fide* capital is to be contributed in aid of such improvement of waste lands. The great difficulty the landlord has to encounter is to get tenants who actually will make a *bonâ fide* expenditure. My experience induces me to think that the system is exceedingly defective, by reason of the landlords not being able to procure a tenantry competent to execute such contracts. My own personal opinion and that of others is, that the only remedy is to take the whole expenditure upon the part of the landlord, who should supply lime, &c., make the main fences, drains and roads and build the farm-houses, leaving to the tenants the mere working of the farm as in England; and I am now engaged in the preparation of leases upon this principle, putting the covenants for improvements on the landlord, adding to a reasonable rent for that land a per centage on the actual cost for manures, &c.; if generally adopted I think it would advance the improvement of the country exceedingly. For many years the principle of bonuses to tenants has been acted upon by Lord Headly and others: his system has been, (lime being the manure that is most wanting on his estate) to give 1*s.* a barrel for lime laid out by the tenant; knowing that the tenant gets it for 8*d.* per barrel; so that at the end of each year the tenant is repaid the capital he has expended on the lime, and also for his labour in carting it to his land, and spreading it on the surface.

2059. If landlords in general have not sufficient capital to adopt the system you recommend, do you consider that it would be fair to their incumbrancers to give them a power of alienating a portion of their waste lands for the sake of benefiting the remainder of the land which they reserve to themselves, and for the sake of benefiting the poorer classes of the community in the neighbourhood?—I do not propose a breach of contract between the landlord and his creditors. I take the estate at its value when the creditor made the advance, if by means of any legal facilities that value can be increased by the tenants. I consider that it is not at all unjust to say, that where capital is laid out by a tenant, that the enjoyment should be secured to him as against the incumbrancer as it is against the proprietor in fee. The creditor having no kind of moral right to the capital invested subsequently to his lien, and his charge on the land, ought not to impede improvements by tenants; if so, the

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estate will not even remain as it was when he lent the money, but it will deteriorate, though if my suggestion is adopted, and improvements follow from the removal of legal impediments, and consequently the creditor's security will be enhanced; for instance, suppose a piece of land worth 100*l.* a year is mortgaged, and that it is let at that price to an improving tenant, who expends a capital of 2,000*l.* or 3,000*l.*, surely the mortgagee's 100*l.* a year, which was the security he took for his money, will be worth considerably more in market than before. He will have what we term a chief rent instead of a rack rent, and that chief rent will sell for several years' purchase more than that which was originally pledged to him, and that increase of value must solely result from the improvements made by the tenant whose possession I desire to secure under such circumstances against the world. We cannot expect that improvements will become general until the possession of the tenantry is guaranteed as effectually as possible.

2060. Are you against creating small fee-simple estates?—Certainly not, and my opinion (confirmed by reflection upon and experience of the state of property in Ireland) is, that the greatest difficulty under which she labours arises from the manner in which estates have been granted, namely, in too large masses throughout the country, and more especially in the southern and western districts. One of the greatest modern improvements of our condition is, that these overgrown estates are gradually coming through the Court of Chancery into market. They are mostly sold in comparatively small lots to a new class of proprietors, who are rapidly increasing in that country.

2061. Do you think it would be desirable that the Crown, where it has property such as Publo Keefe, should from time to time sell to such individual tenants as are able to procure the means of purchasing them, small divisions of the estate?—Undoubtedly, every measure which tends to create a yeomanry in Ireland will advance her condition. There are within my knowledge large tracts in which there is but a single proprietor in fee, without any resident gentry; and to this I attribute much of the present disorganization in that country.

2062. You have heard the suggestion, that when Government makes roads by public grant through wild districts of country, it is only fair to expect the landed proprietors should surrender to the Crown a certain portion of the land to be resold in small lots; do you consider that suggestion a practicable one?—I think we should encounter great difficulty in giving effect to such a system. The present difficulties arise from the entire estate being conveyed by each and every change, so that we cannot bring portions of it to sale; we must first bring the whole under the management of the Court of Chancery, and that process is so extremely expensive and dilatory, that it requires an immediate remedy. To former Committees of the House of Commons, I proposed in reference to this subject that the owners of estates might be at liberty, through a summary process, as if a trader, to present a petition to the Court for leave to sell; and having got an order, that it should have all the authority of a final decree for sale, and on the purchase monies being lodged, that all parties should be called upon to make their claims as against the fund brought into Court; and thus the money would be distributed without the expense of two decrees. An account taken and finally entered, I would think sufficient for all purposes; a report of priorities. The rights of the parties could be equally well attended to and protected by the Court under the summary process I suggest, as under the present system. The damages for land taken for Public Works are so disposed of; the jury values the estate to be sold, and the company pay the money in Court, and on this the purchaser's title is complete, and the parties have merely to suffer the expense of drawing the money out of Court according to their respective rights.

2063. Would you give the power of presenting that petition to the incumbrancers as well as to the proprietor?—Certainly.

2064. Do you think that the question of priorities would be determined as well in the Master's office as at the hearing?—In practice they are now determined in the Master's office; the machinery of filing bills and putting in answers, examining witnesses, the obtaining a decree to account in the Master's office, then obtaining a report, and subsequently a final decree, might be safely dispensed with. The question at last is to get a purchaser, and if the Court had a summary authority to sell, the parties interested in the suit might come in, and make their claims as against the proceeds of the sale (which is the case in bankruptcy daily) instead of against the land.

2065. Might

2065. Might not property often be sold at great disadvantage in that way?—I think not. *Pierce Mahony*, Esq.

2066. Are you not aware of any fraudulent sales being carried on through the medium of a court of equity by the present machinery?—No such case has come within my knowledge. 1 June 1835.

Mr. *William Cubitt*, called in; and further Examined.

2067. HAVE you any suggestions to make to the Committee respecting the manner in which money might be advanced, partly by way of loan and partly by way of grant or loan, not bearing interest by Government, for the purpose of making roads and canals in Ireland?—Yes, I have. I understood that there was a disinclination to grants being altogether given where private individuals were reaping a benefit exclusively to themselves from the advance of this very grant after the loan had been paid off. My idea goes to this, that if the Government advance money to assist individuals in carrying on a great work which may be of public advantage as well as of individual interest, that such interest should be confined within certain limits till the whole of the money advanced by Government had been paid off. For instance, if Government advanced one-third of the capital as a loan to be repaid with interest, and one-third as a loan to be repaid at some future time not carrying interest, and the body of proprietors advancing the other one-third to aid the thing, and for their own advantage afterwards, it would be but perfectly fair that the payment of 5 per cent. should be made to Government for the amount of the first one-third, two per cent. of which should be a sinking fund till that one-third was paid off; the surplus of the 5 per cent. during the time, if any, to go to the proprietors as a company after the first loan has been paid off; then all the surplus above the 5 per cent. should revert to Government till the amount of the second loan was paid, and then the company should hold the whole in perpetuity for their own benefit. Mr. *W. Cubitt*.

Veneris, 5° *die Junii*, 1835.

ANDREW H. LYNCH, ESQUIRE,

IN THE CHAIR.

Matthew Barrington, Esquire, called in; and Examined.

2068. ARE you Crown Solicitor on the Munster circuit?—I am. *M. Barrington*, Esq.

2069. In that capacity has it been your duty to prosecute several individuals from time to time?—It has. 5 June 1835.

2070. Have you been able to trace in any degree the causes of the disturbances in those parts of the country with which you are acquainted, and in which your business lies?—Yes; I kept for several years an account of the cause and origin of each outrage on the Munster circuit; but it would be a long detail were I to give them to the Committee. Several of the causes are detailed in my evidence (to which I beg to refer) before Mr. Spring Rice's Committee in 1830, on the condition of the Irish poor, and before Sir Henry Parnell's Committee in 1832, on the state of the Queen's County.

2071. Do you still continue of the same opinion?—Most decidedly.

2072. Are you now prepared to state before this Committee that a judicious expenditure in the way of public works would be highly beneficial to the country?—There can be no doubt whatever that it would; and in addition to the former evidence, I would mention an instance of the value of such improvement. On a tract of land which I possess in the county of Limerick, I expended of my own money in the formation of a public road through a mountain, 700*l.*, the Board of Works laying out a sum of equal amount. In consequence of that expenditure, it has nearly doubled the value of the land through which the road went, by merely affording to the occupiers the means of drawing up the lime on cars, which was previously carried in baskets on horses' backs; and this road not merely benefiting my land, but the whole range of country beyond it.

2073. Do you mean doubled the cultivated as well as the waste?—No, merely the waste land, but also raising the cultivated; the waste land that was set at 2*s.* an acre was made worth double.

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2074. Do you consider it as immediately worth 4*s.* an acre?—I do.

2075. And is its value increasing?—It is; I have no doubt that with a very small expenditure of capital, and the judicious formation of public roads through the country, the dry mountain lands would double in value in almost every part of Ireland; lime alone turning those heathy lands into fine pasture and good meadow land. No lands produce better oats than the reclaimed mountains.

2076. Is there ample room and opportunity for such outlay?—In almost every part of the country, unless in the midland counties; and even there, there are the bogs capable of improvement.

2077. Is not the consequence of such improvement not only the temporary employment afforded the poor in making the road, but permanent employment in the cultivation of the land?—Certainly, and a great advantage in the administration of justice, for in those parts of the country which were almost inaccessible, it was necessary to increase the police and military force, but by opening these districts and intersecting them with roads, it gave easy access to the police in keeping the peace; I allude to the great mountain district between the counties of Cork, Limerick and Kerry, which were the scenes of murders and other outrages about the year 1821, and the retreat of every offender with an almost certainty of freedom from arrest; but since the formation of the roads in this district, it has been almost free from outrage.

2078. The general tenor of your evidence given before former Committees to which you have referred, was to the effect that the most certain way of preventing disturbance occasionally taking place in Ireland was to find employment for the peasantry?—It was.

2079. And now you recommend as the best means of finding that employment the formation of public roads across those waste tracts of land which are at present scarcely accessible?—I do; the formation of main roads, leaving the branch or minor ones to the grand juries; but great public roads, or great public lines of navigation should be executed by a public board, as the lungs of the country, and thus avoid the local interest which each grand jury has to consider.

2080-1. In your opinion it requires an impulse to be given to it?—Most assuredly it does, and it may arise from a want of money; I would give a grant of half the expenditure to every man who would lay out a moiety of his own money (not that he is to borrow money on the county rates, and consider that as a moiety of his own), but he should lay out a moiety of his own money, and get a grant of the other moiety for the formation of main roads, which although useful to himself, (as, of course, he would not expend any money if they were not so) are still of great public utility.

2082. Under what circumstances is the waste land, at the side of these new roads you have spoken of, taken into cultivation?—By the proprietor of the estate or tenant.

2083. The proprietor sets them, does he not?—In some instances he improves them himself, limes them, makes drains and divisions, and thus forms them into farms of proper sizes, and then sets them.

2084. Would it not be desirable in your opinion that the occupiers of the land so brought within reach of the improvement, should be permitted to have a durable or permanent interest in that occupation, with a view to produce a spirited improvement?—I think it would be very desirable, and it was the main principle of a Bill I was anxious to have passed last year, in order to create a respectable class of small proprietors or yeomanry in Ireland as in England, which is so much wanted. I proposed to give, with proper checks, facilities to tenants for life, and those under settlement to demise on lease, in perpetuity, their uncultivated or waste lands to a company, who were to improve and then sell them, in small farms in perpetuity; and as there are few occupiers in Ireland who could afford to pay the price down for a piece of land, he might pay by a small annual addition to his rent. If the land were worth 1*s.* an acre, let him pay 1*s.* 6*d.* for a given number of years, or 1*s.* 3*d.* for a greater number of years; and thus, by a gradual annual payment, reduce the whole, and ultimately have the land rent-free.

2085. Still that would leave it in the power of the present proprietor of the soil to assume to himself the entire benefit of the improvement thus produced on his waste lands by the expenditure of public money?—It never could; it would not be done by the proprietors; I meant it to be done by a company, who were to purchase the land from the proprietor.

2086. It has been suggested, that Government might fairly appropriate a certain portion

portion of waste land, so improved at the expense of the public, with a view of selling them in small freehold lots, or leasing them out on the terms you propose, as a compensation to the public for the money advanced in making those roads? —If an arrangement could be made with the proprietors, it would be desirable.

2087. Giving power to Government to make the contracts subject to the power of selling afterwards to the peasants in small lots?—Certainly, but not to make it compulsory on the proprietor to give his land in lieu of a road; but if in any uncultivated district three-fourths of the proprietors agreed on the formation of a road, then it should be, by commission or some other means, ascertained how far each of the proprietors is benefited, and he should pay either in money or land the amount so ascertained, as a fair equivalent to the public for the money expended on the road. It is the very principle on which I consider it desirable, that if any proprietor expends a moiety, the Government should give another; the Government thus paying for the benefit to the public, and the proprietor for the improvement of his estate. It would also make the persons served who would not contribute, pay what was fair. In the road I first alluded to, two persons were benefited whose estates the road ran through, and who did not contribute; they were benefited at my expense and that of the public; it would be desirable that parties benefited should be made to contribute; I allude to great tracts of country, not at a small distance from a public road, where a man may say, I am near enough to the road.

2088. Would you give the power to the Board of Works to run such a road?—Yes, certainly.

2089. Do you see any difficulty in taking a proportionate quantity of land from each owner of the waste, according to the benefit the remainder of his estate is likely to derive from the road?—It will require a great deal of consideration and arrangement how to do it; a commission on the spot would be the only way of doing it. I would beg merely to give an opinion, that I think it very desirable to be done, but the mode of doing it would require consideration. I have not had an opportunity of considering it, being ignorant of the subjects on which I was to be examined.

2090. You would have it to a certain extent voluntary?—Yes, or that a certain number of proprietors should do it.

2091. Then it would be a sort of agreement between a certain number of proprietors and the Government?—Yes, it would: for instance, if it were an improvement of the Shannon, I should consider that every county along the banks of that river ought to contribute more or less, according to the benefit to each county, to be ascertained by a proper commission.

2092. Supposing Government by such an arrangement were to become possessed of very extensive tracts of waste land, do you not conceive that a system might be adopted by them for the letting out or the sale of those tracts, with a view to the formation of a yeomanry through the country much more beneficial than would be likely to be adopted by individual proprietors, if such waste land remains in their hands?—Assuredly; for individual proprietors would like to keep the political as well as every other control over the tenants; if a yeomanry is formed, they will be independent of the landlord.

2093. If the owners of the waste lands were the Government, would they be more likely to employ them beneficially for the public than the private proprietor? —I think they would.

2094. Provided they are disposed to sell?—Yes.

2095. But not otherwise?—No; I have heard that Pobble O'Keefe is improving, for the example it will show in the bringing waste lands into cultivation.

2096. Do you think it very desirable that Government should adopt that principle with respect to Pobble O'Keefe, and that that estate should be divided into allotments?—Yes, of good sized farms.

2097. And be sold to the industrious tenantry?—Yes; in the manner I suggested, so as to prevent it falling into the hands of one great proprietor. This can be done by not selling it at once and asking the price to be paid down, but by a scale of rent according to the length of time that the person purchasing would wish to have for payment of the purchase money. Suppose you give a farm of 50 acres, and say that is worth 50*l.* a year; that at 20 years' purchase is worth 1,000*l.* If the purchaser wishes to pay that 1,000*l.* at 60*l.* or 70*l.*, or any other sum a year, I would take a scale of payment at a fixed interest as rent until paid off. Thus by a gradual and small annual payment of not more than perhaps a proprietor would charge as rent, if he purchased, a poor man is enabled to look ultimately to have a free estate, which gives him a strong interest in the preservation of the

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peace of the country, and would tend to prevent the disputes about land, one great cause of disturbance in Ireland.

2098. What is the average size of the farms you would recommend it to be divided into?—It would depend on whether there was any tolerable tillage land attached to it; in waste land from 30 to 50 acres.

2099. Is not that beyond the means of the small peasantry so as to give employment?—The greater part of that land would be in grazing, 50 acres of the one would not be equal to 10 acres of the other. If it were tolerable land he need not keep a horse. On 50 acres he will have his grazing cattle and make his money by butter, having a few acres in tillage, which he could farm by spade husbandry, but the size would depend altogether on the kind of land.

2100. And on the facilities for manure?—Yes; and that is the great advantage of making roads; they should be all made with that view; it is so common in Ireland to have the finest quantity of limestone, which is the best manure for mountain land near the foot of the mountain.

2101. Do not you think it would be an advantage to the country to have a number of small fee-simple estates, even of the smallest description, as low as five acres?—If you make them very small they are apt to sink into the hands of large proprietors. I do not consider that 50 acres of mountain land is more than five or six of rich low land.

2102. But those 50 acres in the process of cultivation will become equal to the best land?—If you do not prevent sub-dividing, it will soon be divided into farms small enough. If the owner has five sons he will probably divide it into five parts.

2103. Are you an extensive proprietor of waste land?—I have a good deal of land near Limerick, but my improvement has been mostly planting. I have planted some hundred acres within 12 years.

2104. Are you aware of the clause in the Public Works Act, enabling commissioners to lend money to individuals for the improvement and drainage of lands?—I know there is such a clause in the Act.

2105. Do you know that tenants for life and other persons having particular estates, though they are enabled to raise money by contribution for moiety grants, are not able to borrow money under the Act?—From general recollection I believe it is so.

2106. Would it be useful for tenants for life, or other persons having particular estates, that they should have that power, and if so under what regulations?—I think it desirable that they should have the power both for their own benefit and that of their successors, if there were proper guards to prevent injury to the inheritance.

2107. Supposing money were laid out by the Commissioners of Public Works, and that it was confined to an expenditure equal to three years' value, and also with the approbation of a Master in Chancery, would not that be a sufficient and fair protection?—I think it would; I do not see how there could be any great injury done to the inheritance by confining the expenditure to a sum equal to three years' rent of the land, taking the precaution of having the work done by a public body, with the approbation of a Master in Chancery, and notice being previously given to the next in remainder and the trustees of the settlements.

2108. Would not such a power be highly beneficial to the country?—I think it would, and to the owners of the estates. A tenant for life will not like to advance his own money on the improvement of an estate, unless he had the power of charging the expenditure upon it. If he had the power of charging a certain sum, he would most likely advance a good deal more.

2109. Is it your opinion that loans from the Board of Works to individuals for the purpose of improving and reclaiming estates might be safely made, the first charge on the estate, without consent of the subsequent incumbrancers?—That would depend on the nature of the improvement; if it were such an improvement as would benefit the estate itself, and immediately increase the actual rent of the estate, I think it would be very fair to give priority to all other incumbrancers; but if the improvement was such as merely tended at a distant period to improve the estate, such as running a road through a great tract of country, and opening that country, and ultimately benefiting the land, it would be matter of consideration how far it would be just to the creditor or those taking charges under settlements to give priority altogether for an expenditure which may be considered more or less a speculation.

2110. In any case is not the result of the employment of capital upon an estate, to a certain degree, in the nature of a speculation?—Yes.

2111. And

2111. And on that account there might be an objection on the part of the mortgagees to allow that priority?—Just so; if it were a certain improvement, I think it would be unobjectionable, but many men of ardent minds will speculate on the result of an expenditure which others would think not quite so certain.

2112. Who is to judge of that?—The Commissioners of Public Works.

2113. You would invest the Board of Public Works with the power of judging as to the probability of the inheritance being rendered more valuable by such an outlay?—Yes, with the approbation of the trustees of the settlement, and that a certain portion of the incumbrancers consented; there may be fraud committed by the tenant for life; suppose a tenant for life whose estate was encumbered to its value, he may speculate on some great rise, and take the chance of its success or failure.

2114. Would not the sanction of the Public Works be a sufficient check on that?—The Public Works are a Board always residing in Dublin; they cannot visit every estate; they must take the representation of it from individuals interested in getting the loans: if a false representation is made, it is by an individual who is interested in getting the loans; he makes his case as strong as he can; but I think there is little difficulty, for there are no incumbrancers in which a moiety would not, if they saw a positive improvement, agree to the charge; and a moiety of all the incumbrancers approving it should be made a first charge.

2115. You are aware that by the Act, if four-fifths now consent, priority may be given?—Yes.

2116. You think that is too severe?—I think it is.

2117. Are not the occupiers of land harassed by the creditors of the landlords?—They are very much, which arises from the system of *custodiam* and *elegit* process, which should be done away with.

2118. What would you substitute?—I would substitute a receiver under the Court, and pay the creditors according to their priority; if you refer to my evidence before Mr. Grote's Committee last year on Sinecures, you will find the evidence of a large sum arising from fines totally unproductive in Ireland. I have known great disturbances arising from the *custodiam* process; it leaves the unfortunate occupying tenants to litigate the priority between the landlord and his creditors in the Court of Chancery or Exchequer in Dublin; thus, suppose a poor tenant is served with a *custodiam* order by one creditor, he is served with a second by another creditor; then comes an *elegit* creditor on a prior judgment; he calls on the tenant to pay him a moiety of the rent; then comes another *elegit* creditor, who insists on having a moiety of what is left of the rent, and sometimes in an encumbered estate there will be perhaps ten claimants for the same rent; the occupier does not know which to pay; if he pays one in error, the other distrains him, and he is the person left to ascertain the priority of creditors' claims, though the costs of doing so may exceed his rent, and after being distrained by each creditor. This leads to resistance to the creditor who distrains after the tenant has paid his rent (perhaps in error) either to his landlord or another creditor; a rescue is generally the consequence, and sometimes loss of life.

2119. Is not the poor man often obliged to pay his rent more than once?—He seldom can pay it, but is frequently distrained for it: in fact the occupier is left to litigate in the superior courts the question of priority (though he has nothing to do with it) between contending creditors.

2120. What is your remedy?—The remedy is, that if a creditor finds it necessary to proceed against the lands of his debtor, a receiver of the rents of the estate should be appointed by the court in which the judgment is entered, and the whole rents received, and not a moiety as under an *elegit*. If the principle is approved, the mode of carrying it into effect will not be difficult. If an estate owed money, and only one person being authorized to receive the rents of the estate, would be not merely beneficial to the occupying tenant, but also to the owner of the estate and to all the creditors. Now a great portion of the rent goes in the costs of litigation. I would abolish the *custodiam* process, which is obtained on a mere fiction in Ireland, and which is never allowed in England unless on a *bonâ fide* case being made out. It is supposed that the creditor is a debtor to the Crown, and has a right to avail himself of the Crown process to get possession of tenants' rents to enable him to pay the Crown. I prepared a Bill to remedy these abuses some time since.

2121. You state that there is a loss from fines in Ireland; how does that arise?—I mean the fines on witnesses and jurors, which are seldom received by Government

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ment to near their amount. They amount to many thousands a year, which would go far in support of the public hospitals in Ireland. The mode of proceeding is this: A person is fined as a witness or juror at the assizes; that fine is estreated into the Court of Exchequer. The process for levying that fine does not issue for several months after. If the process issues for 900*l.*, the sheriff is entitled as his fees to 6*s.* 8*d.* in the pound. If the sheriff levies 300*l.* in money, and puts insolvents for 600*l.* into gaol who are discharged at the assizes, he takes the 300*l.* first levied as his fees on the whole 900*l.*, and thus no part of the levy reaches the public. I saw the absurdity of this proceeding, and in an Act I prepared in 1830 to amend the White Boy Acts, and for abolishing the punishment of death on White Boy offences, and substituting transportation, I put in a clause enabling the judges of assize to issue the process at once for recovering of fines, and to apply the product to the infirmaries of every county, and that the sheriff should be obliged to levy them without being estreated at sixpence in the pound. The consequence has been, that the amount now goes to public charities, which would otherwise be lost. If that principle was extended to all fines and penalties at the quarter sessions and assizes, and under the Spirit License and other penal Acts, it would raise a large fund for the hospitals, and lighten the grand jury levies.

2122–3. You have given a good deal of attention to the practicability of the establishment of "Monts de Piétés," or charitable pawn offices, such as exist in many of the continental states; will you describe to the Committee briefly the manner in which you think they might be best established?—I have for several years been anxious to introduce them into Ireland, and have taken great pains to collect information on the subject, and to ascertain the laws and regulations of these establishments on the continent. It is remarkable that the only countries in which private pawn offices are allowed is in Great Britain and Ireland. In the rest of Europe I cannot find one that is not under government regulation, and for the support of public charities, the object being to "lower interest to the poor, and turn profit to the hospitals." I think they could be established by subscription loans in the first instance, as I believe was done in France. There is a very large one at Bordeaux, and we might regulate them by law, as Bonaparte did by the Code Napoleon in 1804, and Louis in 1824. I have been so anxious on the subject, that at this moment I am getting one erected at Limerick, and I propose having the fund raised by debentures at 6 per cent., and to apply all the profits, after paying that interest in the support of an hospital. I would beg to refer to a Prospectus which I circulated on the subject, and which I request may be considered as part of my evidence on this subject.

2124. It has been found abroad a very productive source of revenue, and you think it would be so here?—I think the profit would be more than sufficient for the support of all the public hospitals of the country.

2125. Would you think it necessary to have a special Act of Parliament to encourage the institution?—I think it may be necessary; and the principle of the interference of Parliament is admitted, as it is a singular fact that the pawnbrokers of Dublin pay 100*l.* a year each (above their license) to the support of the local police, which amounts to several thousands a year, although no other pawnbrokers in England or Ireland are similarly charged.

2126. The profits of pawnbrokers are very considerable?—Enormous; they are allowed 25 per cent. by the Pawnbroker Act in Ireland, but they receive several hundreds per cent., as will appear by the Prospectus I have given in.

2127. Are not small agricultural farmers exposed to great extortion in the way of loan in Ireland?—I cannot say; whenever they borrow from the loan funds they are honestly and fairly treated, but among themselves it is possible they may not be so.

2128. Would you recommend that the system of lending small sums of money to small farmers be increased?—When you can do it with security, I would.

2129. Are you confident of the beneficial results from the loan fund arising to the city and county of Limerick?—I am.

2130. It not only maintained itself, but produced a profit of 1,100*l.* or 1,200*l.* in the course of eight or nine years?—Yes, there has been a very great profit, and increase of capital; I would increase the fund out of which the advance is made to almost any extent you please.

2131. On what security is the money advanced to farmers?—It is advanced on the personal security of the person borrowing and two others.

2132. On the security of the borrower and two other solvent persons?—Yes; therefore

therefore he must be a man of good character, or he could not get two others to join him who are solvent.

2133. To what extent do you think that personal security can be safely taken upon loans by the Board of Works, at present they being limited to 1,000*l.*; do you think that that sum could be exceeded?—That would depend altogether upon the security; I do not see why the power to the Board of Works to lend should be limited to 1,000*l.* You may have as good personal security for 5,000*l.* or 7,000*l.* as you have for 1,000*l.* Limiting the amount does not alter the nature of the security obtained, particularly as they lend not on the individual personal security, but with two sureties; I do not think there is a risk in extending the limit of the personal security, provided the repayment is not distant.

2134. There is much greater facility of making loans on personal security than on mortgage, for which you are obliged to exhibit all the title-deeds and the abstract of the title-deeds of the estate?—Much more where the personal security is good; the person applying does not like to go to the expense, particularly if the sum is small, of investigating the title to a freehold estate.

2135. If the fee on searches which is at present required were removed, would it materially reduce the expense to which a borrower on mortgage is liable?—Certainly it would; I think it is the heaviest charge now, and one that ought to be removed. I see no difficulty in removing it; it is a payment to the Treasury; and as they have given up the stamp duty on deeds and other securities relating to public works, I see no reason whatever why all payments for fees in the Registry Office should not be abolished.

2136. How would you propose to do it so as to prevent fraud?—I would propose that every search on a loan for a public work that was applied for by the solicitor to the Board of Public Works should be given without charge; that he should be responsible as a public officer; that when that search was received no other use should be made of it but for the purpose of the loan, and if the loan was not completed, that that search should be cancelled or not given to any party.

2137-8. You mean that it should be a confidential transaction between the Board of Works and the officers of search?—Yes.

2139. As to turnpike roads, would you consider it desirable that the present turnpike-road system, that is the system of maintaining and repairing roads by turnpikes, should be abolished, and should be placed under the management of a Central Board as a general measure, such as the Board of Works?—I would certainly; it would be very desirable that all the main roads of the country should be under some public central control.

2140. Would you give a general controlling power to the Commissioners of the Board of Works over the grand juries?—I would rather the Public Works should do all the main roads of the country, and let the grand jury present for them.

2141. In all cases of compulsory presentment, do you not think it is fair for the grand jury to have the accounts of the expenses of the details submitted to them, so that they should point out any case in which they think there has been mal-administration or want of economy?—I would give publicity to all accounts, as is the case for police presentments. The grand juries seldom look into the accounts, yet they are always ready to be submitted to them if they wish to examine them, and the inspector general of the province, or the sub-inspector, is directed to attend the grand jury to give explanation as to each item.

2142. That is a matter of courtesy?—No, as matter of right.

2143. This is not the case with respect to presentments under the Board of Works?—I believe not.

2144. And with respect to many other compulsory presentments?—No.

2145. Would you recommend that the Act passed last year, the temporary Act respecting mail-coach roads, should be made permanent?—I do not recollect the Act; I would recommend that the repairs of the main lines of mail-coach roads should be done by the Board of Works under the direction of the post-office.

2146. Do not you think that there is a material objection to the present system of grand juries paying for roads that pass through their particular counties, when perhaps those roads may not be particularly advantageous to the counties they pass through?—I cannot say there is.

2147. Are you aware of the case in the county of Roscommon, that the Sligo mail-road and the Galway mail-road both go through different extremes of that county?—I am not aware of it; but even if it did, perhaps that would be the exception;

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tion; there is scarcely a road that goes through any county that is not beneficial to it.

2148. Although that may be so to a certain degree, do you not think it will be better that all the expenses of the mail-coach roads in each province were borne equally by all the counties, according to their number of acres?—If it were possible to do it, I think the best system would be to make main lines of road all through the country, and have one general tax for them, and let each grand jury present for the branches from the main line beneficial to the county.

2149. Would you apply that principle to the whole of the United Kingdom?—I do not think you could tax England for roads in Ireland, but I would lay the tax over Ireland for the main roads in Ireland, if it could be done; and have a public central body, adopting a general line of roads without reference to existing roads, but availing themselves of any that were desirable.

2150. This should be in relation to towns and places that were passed through?—Yes.

2151. If the principle be good in respect to the whole of Ireland, may not the principle be equally good with respect to the whole of the United Kingdom, and might not the funds be provided out of the general revenue?—This would be difficult.

2152. How would you draw the line between the main roads and the inferior ones?—I would take every road that went direct from Dublin to a county town to be a main line, and from that town to the assize town of another county; I would consider the mail-coach lines as main lines.

2153. Would you consider it a main line from Ennis to Kilrush?—No.

2154. But from Limerick to Galway you would?—Yes, where it was a main road terminating at some assize or large town, no matter whether from one large town to another; but where it went from one assize town to the interior of the county and ended at a village, I should not consider that a main line.

2155. Do you consider it desirable that grand juries, if grand juries should be hereafter remodelled, or an equivalent body representing the general interest of the county, should possess increased powers with respect to different descriptions of Public Works, which at present cannot be presented under the existing laws by grand juries, such as the erection of piers and the improvements of rivers; do you think it would be desirable to give grand juries the power of doing it?—I would, provided a public board having decided on what the improvement ought to be; but I would not give the grand jury the power of erecting a pier, and then presenting for it, unless it were approved of by some public board.

2156. Improving a harbour, where, for instance, there may be at the mouth of the harbour a few rocks, would you think it desirable that the grand jury should have the power of removing those rocks?—Certainly, I would.

2157. Under the control or superintendence of the Board of Works?—In so obvious an improvement as that I would give them power, almost without control, as much as I would in removing rocks from the high road.

2158. Would you think it desirable that grand juries, or any local body, should have the power of establishing in the waste lands in such counties in Ireland, establishments such as there are in Holland, with a view to the reclamation of such lands and the employment of the able-bodied poor?—I am not sufficiently acquainted with the establishments in Holland to form an opinion.

2159. Might not such a body as has been mentioned, having the powers of the present grand juries, but still more extended, be made the means of giving employment to all the able-bodied population of the county, who might at any time be in destitution from want of it?—I see no objection to such body giving employment in public works.

2160. The question contemplated something of this kind, that the grand juries should have the power of appointing a committee, with permanent functions, but liable to change members; that that Committee should have the power of purchasing lands, the value of which does not exceed a small yearly rental; that upon lands of that description they should have the power of raising necessary buildings, and eventually selling to the colonists small portions of land in the same manner as was contemplated in the former examination with reference to the Crown lands?—I think it would be very desirable that there should be power given to somebody to purchase these lands, and set them out in the manner proposed, but I am not prepared to say whether it should be by a committee of the grand jury, which is a fluctuating body.

2161. Do

2161. Do you think it desirable that there should be in each barony a committee permanently sitting, for the purpose of of superintending all public works within the barony, and directing the funds raised for public works more especially to the employment of such of the able-bodied poor as were unable in their own parish to obtain employment?—I am very much against a committee in each barony; I would rather have one in every county. I am afraid of baronial authority; it would keep excitement alive in every barony, which it is desirable to avoid.

2162. It has been proposed, that in case of the tributaries flowing into the Shannon or other navigable rivers in Ireland, or rivers that might be made navigable, and lakes, that one-fourth should be given by Government, one-fourth should be subscribed by individuals, the proprietors, and that the other half should be lent by Government on tolls to be raised on the navigation until that half was paid, when no tolls should be payable but those necessary for maintaining the works; in your opinion, would that be a useful expenditure of money, and a fair way of raising money necessary for this purpose?—I think it would; but raising one-fourth from the proprietors would be very difficult; I would rather raise it from the county generally or the barony; if a proprietor has an estate upon the banks of a river, the person who has his estate next to it is nearly as much benefited as he is.

2163. Suppose that there are individuals willing to embark capital on the improvement of inland navigation, and that they will subscribe one-third of the cost of such expenditure, that Government will lend them another one-third on the security of the tolls to be derived, and that the other third will be a grant by Government; do you think that that would be a useful expenditure of the public money?—It is very reasonable for Government to give a grant of one-third, where the other two-thirds were raised either by loan or subscription; but the grant of one-third should altogether depend on whether it is a public work, or solely for private advantage.

2164. What do you mean by public works?—The improvement of navigations, and the formation of great lines of road, of which the public could avail themselves.

2165. Do you think it fair the public should contribute more, without repayment, for those works, the profit of which ultimately returns to individuals?—Certainly not; no, I do not consider that fair, but I would lend money on these works liberally.

2166. Take the case of the Kingstown Railway?—I do not think Government ought to contribute to the Kingstown Railway, unless by lending money at the lowest possible rate of interest and most distant payments. I do not think there should be a grant, unless the public get an equivalent benefit. In a case where individuals establish a great public line of communication (though there is a certain rate paid to them for traversing it), there may be a grant, provided the charge was proportionably reduced, so as to be beneficial to the country. I conceive that for every grant from Government there must be some public benefit or equivalent given in return. In grants for high roads, the individual who gives half is benefited in the improvement of his estate, and the public is benefited by an open communication, being the equivalent for the grant from Government of the other half.

2167. In the first case put to you, that no tolls were to be exacted after the payment of one-half to the Government, in that case you would not object to the grant?—No, certainly not; or if, in the other case, the tolls were so limited wherever the public benefit was great.

2168. Would you say ten per cent.?—I have not considered, and would not presume to give an opinion as to the amount. Wherever it is considered that the advantage to the public is equivalent to the grant, no money could be better applied, for the more you open the country, the greater will be the saving in the expense of military and police, and the more productive the public revenue.

2169. Would it not be desirable in all cases to establish a limit to the amount of tolls that may hereafter be taken from works of this description?—No Bill ought to pass without a maximum toll, leaving a discretion to reduce, but no discretion to add. No Public Bill or Private Bill ought ever to pass that gave the power of charging undefined tolls; I never saw an Act in which it was not limited.

2170. Would you conceive it expedient that the Government should become merely shareholders in such an undertaking as the Dublin and Valentia Rail-road, in the same manner that the French and American Governments have done, so that the Government would have no priority of receiving the tolls, but merely gain or lose with the rest of the company?—I certainly think it would be very right in Go-

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vernment to advance a sum of money, taking the risk of the rise or fall of the security or failure of the undertaking, with this proviso, that there is a security for the work being done, and that it is one of great national importance, as the rail-roads talked of from Dublin to Valentia and Galway.

2171. Then, if half the sum considered necessary by the Board of Public Works for the rail-road from Valentia to Dublin was subscribed, you think it would be expedient for the Government to subscribe the other half?—Certainly, so that the half subscribed by individuals was first expended, and that Government had an equal participation of the profits on expending the other half.

2172. Might not the Government very properly trust to the Board of Works for giving them a report as to the advantage of the undertaking, and that they should advance their funds, in the first place, with the other half which the subscribers had advanced?—I should be afraid that if Government did not insist that the entire moiety, or at least a great portion of it, should be first advanced, there would not be the same anxiety on the part of individual subscribers to pay their subscriptions, as if the Government had not advanced any until the others had paid in their shares, and that Government may be left to finish the work.

2173. If it was all paid up, Government having no risk?—No; that I consider the same as if it were expended.

2174. That the expenses should then go on *pari passu* you mean?—Yes.

2175. You stated the difficulty as to the fourth to be levied of the property benefited by the navigation; would not the jury or the commission ascertain the benefit to the parties?—I think they could as to counties; but I fear it would be very difficult to do so as to individuals.

2176-7. You consider safety harbours as national works, which ought to be paid out of the national funds, on the sea coast?—Yes.

2178. Do you think they are required on the West coast of Ireland?—From all I have heard, they are required very much, particularly on the western coast.

2179. Have you turned your attention to the fisheries?—No.

[*The Witness delivered in the following Prospectus:*]

PROSPECTUS for establishing a "Mont de Piété," or Charitable Pawn Office, in *Limerick*.

In the year 1833, a proposal for the establishment of a "Mont de Piété" in Limerick, was so well received by the public, that the building is now in progress of being erected. The profits were intended to be applied towards the support of the "Barrington Hospital and City of Limerick Infirmary;"* into which, from its opening, on the 5th November 1831, there have been admitted 1,066 persons; of which number 733 were discharged cured, and five incurable; 231 were relieved, 67 died, 30 remain in hospital, and 32,190 externs received advice.

During the prevalence of cholera, in 1833, the governors having allowed the hospital to be used for patients afflicted with that disease, 1,537 persons were admitted, of whom 986 were discharged cured, and above 1,000 externs were relieved.

The voluntary benefactions of several of the inhabitants of the city, and of others unconnected with it, have given some funds to the establishment, but by no means commensurate with the aggregate of suffering, or the demands for relief, which may be expected in a population of above 90,000 persons. Several are refused admission daily, although there is ample accommodation for double the number of patients, if there were funds for their support.

To extend the benefits which the hospital has conferred, and to increase its utility, inquiries have been directed to the means by which similar institutions are elsewhere sustained.

On the Continent, especially in France, Germany, Holland, and Italy, most extensive hospitals are amply supported by establishments called "Monts de Piété," and there is little doubt that a similar institution in Limerick, would not only enable the hospital to afford relief to the fullest extent required by the population, but also, in another respect, most materially benefit the poor of the city.

Without entering into the details of the management of the "Monts de Piété," it is only necessary to explain the general objects of these charitable institutions.

It is well known that the distress and improvidence of the poor frequently compel them to have recourse to the Pawnbroker, and that the advances which they there receive are made at a rate of interest ruinous to the unfortunate persons who seek this mode of temporary relief. It is true that the rate of interest is sanctioned by Government, as by the 26 of Geo. III. chap. 43, they are permitted to receive 30 *l.* per cent. per annum, besides the allowance for duplicates. This is on supposition that the pledge is not redeemed before the expiration of a month. The practice is otherwise, as the most distressed persons frequently

* Incorporated by the Act of 11 Geo. IV. intituled, "An Act for the Management and Direction of the Hospital founded by Joseph Barrington and his Sons, in the City of Limerick."

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quently redeem the pledges within the week. It is a common habit to deposit some article of apparel on the Monday morning, which is redeemed on Saturday night, to enable the individual to make a decent appearance on the Sabbath. But as the lowest charge of interest by said Act (and the amendment thereof, 28 Geo. III. chap. 29,) is for a month, and as it is very much the habit to redeem in a week, the charge including the price of the duplicate (without calculating compound interest, or the interest on a shilling where only a fractional part is given, and for which interest is charged as if the entire shilling had been lent) will amount, in the cases of those in the greatest want, to 866*l.* 13*s.* 4*d.* per cent. per annum.*

Though this business is, in most instances, conducted by persons of fair and unblemished character, yet there is generally some degree of odium attached to it, from its being thought that advantage is taken of the ignorance and necessity of the borrower, and that the enormous profits of the lender are wrung from the distress and misery of the poor.

The "Monts de Piété" were established to remedy these evils, and for the purpose of making advances to the poor on deposited pledges, at a fair and equitable rate of interest; and it is remarkable that the British Dominions are the only part of Europe in which private pawn offices are allowed, or in which the profits are not applied in charity.

The success of the first experiment extended these establishments in Germany and France, and other parts of the Continent, so that at length they became an object of attention to the governments of those countries.

They have been, for years, established in all the provincial towns in France, under the control and direction of the Crown, and their management was regulated by the "Code Napoleon" in 1804, which states, "That no house of Loan or Security can be established but to the profit of the poor, and with the approbation of Government," and other provisions were made by a Royal Ordinance of Louis XVIII. in 1824.

The principle on which these establishments are formed, is "to relieve the temporary wants of the poor by advances of money upon pledges, securing them from rapacious and usurious exactions, and that the profits (after defraying the expenses and paying the interest of the capital employed) should become a fund for the benefit of the class of persons from whom they are derived, and appropriated to their maintenance and support, when sickness and disease prevent their pursuing their ordinary occupations."

In those countries, private individuals are prevented from carrying on the trade of a pawnbroker, the Ordinance declaring that the "object of the law is to lower interest to the poor, and to turn profit to the hospitals." It is at the "Monts de Piété" only that money is lent upon pledges; to them the poor man goes with perfect confidence that he will receive the fair value on the article deposited—that no advantage will be taken, either of his ignorance or necessity—and that he is contributing to a fund, which will comfort and relieve him in the day of distress and adversity.

In the councils of Lateran and Trent, and Fleury's and other Ecclesiastical Histories, the advantage of the "Monts de Piété" upon the industry, habits, and morals of the people, are so forcibly pointed out, and they appear so desirable in every large community, that it is surprising the public attention has not been directed, in these countries, to so excellent a plan for benefiting the poor.

It is proposed, that a capital be raised for the establishment of a "Mont de Piété," in connexion with "The Barrington Hospital and City of Limerick Infirmary," by debentures of 5*l.* to 100*l.* each, to bear interest at six per cent.

That the profits of the establishment shall, in the first instance, (after defraying the expenses,) be applied in paying the interest of the capital lent, and the surplus profits to be divided in equal shares, one in paying off the debentures, and the other (and when the debentures are paid, the whole,) in the maintenance and extending the benefits of the hospital; the funds of which would be thus so much increased, that the governors could enlarge the sphere of its utility, not only in giving relief and comfort to the sick and indigent, but in assisting them after their recovery or during their convalescence. It cannot have escaped the observation of those who attend a public hospital, that there occur many circumstances of distress to be relieved, besides the cause for which patients are admitted. Many persons are obliged to relinquish their trades, having consumed what they possessed in the hope of relief, and run into difficulties from which they are unable to extricate themselves; and how frequently does it happen that they are unavoidably dismissed from the hospital in a weak and infirm state, to return (perhaps to a large and wretched family) without the means of support, or strength to seek employment, and often without a home; and thus frequently causing a relapse, or establishing a diseased and weak constitution?

These are not speculative refinements, but truths drawn from experience and reality, and it is obvious that they must be felt with accumulated severity by such as have families dependent on them for support. Is not then the power of affording relief to such objects most desirable?

By the means proposed, benevolent persons will assist in a work of charity, without any injury to themselves, as the rate of interest is greater than they could receive in the public funds; the profits of such an establishment will ensure ample security, and being merely lenders

* One shilling lent and received in the week pays 1*d.* interest, and 1*d.* for the duplicate; this is 8*s.* 8*d.* interest on one shilling for a year—or, £. 8. 13. 4*d.* on a pound for a year—or, £. 866. 13*s.* 4*d.* on £.100 for a year—and this exclusive of compound interest.

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lenders of the sums for which they take debentures, incur no responsiblity, nor have they any share in an establishment conducted under the directions of the governors of the hospital, who are a corporate body and not individually responsible. Tradesmen and other persons may take debentures of even 5*l.*, and receive nearly double the amount of interest now received in the savings bank, and be at all times enabled to raise money on such debentures, as they will be received as pledges, and money lent thereon.

The confidence of such advantages following this proposed establishment, is not founded on the sanguine expectations of the writer, but in the result of a very minute and accurate inquiry into the effects which have followed the endowment of these institutions in France, Italy and elsewhere.

It is a confidence which all must feel who will take the trouble of inquiring into the general success attending a pawnbroker's business on the most limited scale. There is scarcely an instance of a pawnbroker's failure, or his name appearing in the Gazette; and their profits, in proportion to the capital employed, far exceed those of any other business whatever.

It may be said that this is an infringement on the business of others; the same objection would equally apply to a Joint Stock Bank as an interference with the ordinary bankers, or to a rival setting up in any other trade. In these instances the object is private gain, whilst this is for the relief of those from whom the profit is chiefly derived. In Dublin every pawnbroker pays 100*l.* per annum to the public establishments, under whose control they are placed.

The situation for the "Mont de Piété" is in the most central part of the city, with approaches from George's Quay, Baal's Bridge, and Mary-street.

The plan is thus briefly submitted, and, it is hoped, that as the blessing of the Almighty invariably attends any well-directed plan of charity and benevolence, the result will be equal to the expectation of the suggester.

Dublin, April 1835. *M. Barrington.*

Should you think proper to aid in the undertaking, you will please state what number of Debentures, and of what amount, you wish to subscribe for, by a letter to Matthew Barrington, 50, Stephen's-green, East Dublin; Daniel Barrington, George's-street, Limerick; or to Mr. John Allen, Register, Barrington Hospital, Limerick. No part of the sum subscribed will be called for until the arrangements are completed, and then only in instalments as wanted.

Mr. *Alexander Nimmo*, called in; and Examined.

Mr. *A. Nimmo.*

2180. WHAT is your profession?—An engineer.

2181. Have you been employed as a professional man in Ireland?—A good deal.

2182. In what part of Ireland?—In the West of Ireland.

2183. Have you been at Connemara?—Yes.

2184. Are you nephew to the late Mr. Nimmo?—Yes.

2185. Were you employed under him in the works he executed there?—Yes; in superintending the roads and bridges.

2186. When did the late Mr. Nimmo go to Connemara?—In 1822, to expend the money for the relief of the poor on the public works.

2187. Can you tell the Committee how much he expended?—I am not aware of the items for that country.

2188. Can you inform the Committee of the nature of the works he executed?—Principally roads; a road partly made about 12 miles from Outerard to Clifden; the rest of this road was made by presentment; the coast road from Galway to Clifden; a road through Joyce Country, and from Clifden to Westport; to Cleggon and to Roundstone.

2189. Have all or any of those roads been completed?—The Joyce Country road is completed.

2190. Is that the only one complete?—Yes.

2191. Why?—The stoppage of the grants; they were never sufficient to make all the roads we had in hand in the Western counties.

2192. Has not a grant been made last year for the completion of a road from Outerard to Clifden?—There was.

2193. Has that money yet been expended?—I believe not.

2194. Have you seen that road lately?—I have.

2195. In what state is it?—It is impassable as a road for carts at present.

2196. Is not the county surveyor at this moment employed in surveying that road?—He was when I was in the county, but I have heard since of their stopping. I have been written to.

2197. By whom?—By Mr. Martin the Member.

2198. Has he given any reason why?—No reason; he says the people are not at work. I think the prices given are too low; the contractors have given up.

2199. How

2199. How soon do you think that road might be finished?—There is one large bridge, and it would take some time; I think it would be finished in two or three months if exertion was used and better prices given to the people.

2200. Is the money granted for that purpose sufficient?—I am not aware of the amount.

2201. Was 4,000*l.* sufficient?—Yes; I think it was for that road.

2202. As to the Southern line of road from Clifden to Galway, that still remains in an incomplete state?—Yes.

2203. Would it not be a most beneficial road?—I do not know that any could be more so. It would open a vast extent of country at present totally useless and inaccessible; the seat of illicit distillation.

2204. In your opinion, what has been the consequence of the making of these roads to the country; what are the effects on the place, the inhabitants, and also in reference to the general revenue of the country?—The revenue of the country has increased from nothing; it was originally a great place for smuggling. Connemara cost the Government a great deal to protect it from smuggling; now the revenue has increased to nearly 8,000*l.* a year. Clifden is a large town built solely from the expenditure of the public money in it; there are about 300 houses there; I am not aware of the exact number. Roundstone is the next in size, and it may be well to remark, that it has sprung up on account of its fine harbour and the great extent of the fishery within the last four or five years, long after the public money was expended in that part of Connemara, solely from the resources of the country; and Tully is the next, principally built by Mr. Blake. The people are much improved in their habits and appearance; they have become a very industrious and peaceable race.

2205. Are there many other situations in which towns might rise if roads and communications were made?—If the coast road was finished, I think there would be one or two at Killkeran Bay, one at Ballydangan and at Castles Bay.

2206. Are you acquainted with the Pass of Ballydangan?—I am.

2207. Would it not be most useful to the people of that country and the people of the town of Galway if that Pass were cleared?—Decidedly of great advantage to both.

2208. Is there not great risk of life and property?—Yes; many lives have been lost at this Pass, and every tide some property of the poor boatmen.

2209. What would it take to remove the obstructions in that Pass?—I think 400*l.* or 500*l.*, according to Mr. Killsby's plan; but 200*l.* would clear it. A great deal was done to it by the late Mr. O'Flogherty of the Islands.

2210. Are you aware that the Board of Public Works in Ireland were willing to advance one-half?—They granted half.

2211. What prevented the work being done?—They required the other half to be raised by subscription or by the grand jury; the grand jury did not bring it before them; it appears they have no powers to make such a grant; only three-fourths was raised by Mr. St. George and Mr. O'Saughnessy; the other one-fourth could not be got in the county.

2212. Have you been employed in constructing any harbours or quays on the Western coast of Ireland?—None on the Western coast; I have been on the East coast and in South Wales.

2213. Might not many useful harbours be erected on the coast of Connemara?—I think a great many.

2214. For the purpose of the fishery?—Yes.

2215. Is there any fishery carried on now?—Not at present; no white fishing; but the herring fishing last year was immense.

2216. Where did they carry them?—To Galway by boats, a great number of them to Skerries and the South of Ireland.

2217. Have they roads to carry them?—Yes, they have roads to carry them by means of horses and baskets and carts from Roundstone through Joyce Country and to Galway; a great number of carts came there, but they so cut up the road it was impossible to travel after some time.

2218. What road?—The Joyce Country road and the Galway road; part of the new line was open; it has been nearly destroyed, so great was the traffic.

2219. Have you lately been in the county of Galway and at Connemara?—Within the last three months.

2220. Have you received any communication within the last few days as to the distress?—I received a letter this morning.

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2221. Have you any objection to read that letter?—No; I received one from Roundstone; they wished me to find out the secretary to the Association for affording Relief to the Irish Poor.

[*The Witness reads the following Letter:*]

TRY if you can find who has succeeded Mr. Hyet as secretary to the Irish Relief Association, and lay the case of this district before them. The people are on the borders of actual famine already, and two months are yet to pass before they can expect to have any potatoes; add to this, that in thousands of instances the seed sown has totally failed. I examined J. King's two plots on Friday, and there is not a single seed growing. Get Mr. Mortin to assist you in this, as he leaves this to-morrow, and use every exertion you can to have relief here instantly. Should the means be sent, the priests and I will see that none but the most necessitous get it, and I shall see that it is usefully and beneficially laid out.

Send a map and estimate of the Murvy road, and as you have the map, show it to Mr. Spring Rice, and perhaps he would get the Board of Works to do it, which, if done immediately, would relieve the poor people at once.

Roundstone, May 31, 1835.

2222. Whence has arisen this distress; from the want of potatoes?—I think it arose principally from their being obliged to dig potatoes earlier last year, in consequence of the quantity being short.

2223. Might not the same circumstance take place this year?—Yes.

2224. How can you account for the failure of the plants?—I cannot speak to that; I suppose the early damp; the great quantity of rain that fell.

2225. The roads in Connemara, notwithstanding the large grants that have been made, have remained for eight or ten years in a state impassable, so that there is no continuous line of 25 miles which is open to the public?—Some have remained totally useless; there is no line of 25 miles of new road yet made.

2226. How many miles altogether in Connemara have been made by public grants?—Something more than 60; there has not been more than 60 made of workable road, partly made about 90 miles.

2227. If these roads had been completed seven or eight years ago, would not the improvement of the country have been very much advanced?—Decidedly, much advanced.

2228. You said the roads were impassable, and that some of them were not finished?—Yes, a few miles in the centre are not finished; they did some last summer, but they did not get on at all well; the roads are still useless.

2229. Is the road passable between Joyce Country and Lenan to Clifden; is that road passable?—It is passable, but it is not a good road; the old road is very hilly.

2230. Are not the roads that were then made, are they not now in fact in a state of great want of repair?—A great want of repair; they have almost become useless.

2231. With whom is the fault?—I am not aware; the repairs were always done with the grants for making.

2232. Have the Board of Works the power of repairing these roads and charging the county by compulsory presentments?—They have, and have done it in many instances in Connemara.

2233. Why did they not keep these roads that were made in repair?—The road that was made they have repaired; that was the Joyce Country road; the repairs were so long delayed that the road was totally useless for six months.

2234. That is the road completed?—Yes; open to the public.

2235. But the roads that were not completed they did nothing to?—Nothing.

2236. The road was not well drained?—The road was sufficiently drained through Joyce Country, but it was left for seven years without being repaired, and being a gravel road it soon wore out. The traffic was immense during the fishery season, and it is during the winter you might see a line of 20 or 30 carts coming loaded with fish, going to the places by Cong and Ballinroke.

2237. Have you any suggestion to make?—Nothing further than that the completing the central line and the Southern coast road, of which great part has been made, thus completing the whole line round the country from Galway to Westport would create new towns, and vastly increase the Revenue.

2238. You stated you knew the East coast of Ireland, do you know Ballytague Bay?—Yes.

2239. You know the Saltee Islands?—Yes.

2240. Do you know the Tower of Hooke lighthouse?—Yes.

2241. And the Connebey and the Tusker lighthouses?—Yes.

2242. Are you aware that the bay called Barrystown Bay, is the bay in which almost

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almost every vessel that is in danger is wrecked?—Several wrecks have taken place there; some packets were lost on the Tower of Hooke Point.

2243. Are you aware of the situation; you say you have heard of St. Patrick's Bridge?—Yes, I have been at it.

2244. Have you seen the small pier of Kilmore, at the commencement of St. Patrick's Bridge?—Yes.

2245. Are you not aware that if that pier was made a little larger, a little further out, that the boats now may be afloat, and it might have a great tendency to save the vessels from being lost?—The vessels missing the Tower of Hooke in making the harbour of Waterford with this as a lea-shore, would no doubt find shelter in the harbour if it was extended.

2246. Would the proposed embankment give water to vessels at every period of the tide?—I am not aware of the depth of the water in the bay there.

2247. You are aware of the small harbour?—Yes; I know an application has been made from the Fishery Board for that.

2248. You have heard of the steamer, the Water Witch, being lost last year?—Yes.

2249. That Water Witch was lost just in the causeway of St. Patrick's Bridge, was she not?—Yes.

2250. Do not you suppose that if a sufficient harbour was there, so that boats could at all times of the tide be afloat, that it would have a great tendency to save those vessels that are led in either by wind or mistake into the Ballytague Bay?—No doubt.

2251. If a vessel gets into that bay she is so completely blocked in by the Tower of Hooke and all that coast, that you suppose it would be very difficult for that vessel to get out?—With the wind blowing in-shore she could not, for there is a great set of the tide over the bridge.

2252. Have you heard of vessels mistaking the Tower of Hooke for the Saltees, and by that means supposing themselves clear of the Irish coast, instead of which the vessel was standing in to St. Patrick's Bridge?—I do not know.

2253. From your local knowledge, do you suppose it possible?—Yes; I think it is in thick weather, if they could not see the Connebey light-ship.

2254. Do you recommend the establishment of a safety harbour in this locality?—Not of a safety harbour, such as at Dublin and Howth, but a small landing pier, so that a vessel could run for it.

2255. Would such a pier as has been contemplated in the questions offered to you, give water to vessels of 400 tons burthen?—That would depend much on circumstances, such as the depth of water in the place, to make what is called a safety harbour; it would require to be of sufficient depth for a ship of that tonnage.

John Hyacinth Talbot, Esq., M. P.; Examined as follows:

J. H. Talbot, Esq. M. P.

2256. HAVE you any papers to lay before the Committee?—I would just state this to the Committee—[*Paper handed in.*]—

To His Excellency the Marquis WELLESLEY, K. G., Lieutenant-General and General Governor of *Ireland*;

The humble MEMORIAL of the undersigned, Fishermen, Boat-Owners and others of the Parish of Kilmore, and County of Wexford,

Respectfully represents,

THAT a Fishery has been carried on here upwards of eighty years under peculiar disadvantages from the want of a proper harbour for boats adapted to the employment. A small safety-wall or pier was first built in 1795 by the fishermen themselves, with very limited assistance from the gentry and farmers of the immediate neighbourhood: since that period the number of individuals pursuing solely the avocation of fishermen has greatly augmented, and a corresponding increase of the population in the vicinity naturally followed: That at the present moment about sixty craft of various kinds are employed, the crews of which, with their families, amounting to upwards of six hundred souls, are entirely depending on the success of the fishery for their subsistence: That the larger class of boats now here are laid upon the beach eight months in the year, having no shelter or asylum to protect them when the weather is at all boisterous, whereby their crews are great sufferers; and the smaller ones are likewise retarded, though in a lesser degree: That at this fishery lobsters, crabs, turbot, haddock, cod, mackerel, bream, gurnet, pollock, ling, eels, mullet, plaice, soles, pilchards and herrings are caught here in great abundance in their respective seasons: but from want of boats sufficiently large to convey them to market, those persons who take them labour under serious disadvantages, comparatively with other

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fishermen: That if a sufficient place of safety was erected, large and well-adapted boats would immediately be placed in the fishing trade. In curing and preserving fish, salt is absolutely necessary, and that article has now to be carted fourteen English miles, which enhances its price to the consumer nearly 100 per cent.: the same remark will in some degree apply to coals, the only fuel to be had here; whereas if the solicited improvement took place, small vessels would come direct, and the inhabitants would be supplied with those necessaries of life at moderate prices at their own doors.

Your Memorialists further respectfully represent, that in the contemplated extension of the pier, important benefits might be conferred on the shipping interest by means of its affording a safety to vessels, leaky, embayed or otherwise in distress; even in its present state within the past thirty years, upwards of forty vessels have been assisted, and many human lives preserved. Vessels that became wrecks on the adjoining coast could have been brought safely into this place, had it been adequate to their reception. Instances have occurred when men have been taken from desolate rocks by the intrepidity of the fishermen, and a very recent event has amply tested their bravery and humanity. Were they in possession of large boats, much more effective aid could be rendered to lives and property in any case of emergency. Your memorialists cannot avoid remarking that although the population of this place is numerous and dense, their industrious and peaceable habits are proverbial; and when other parts of the country have been unhappily disturbed, and large and expensive bodies of forces found necessary for the preservation of the public peace, riots or tumults here have been unknown; nor within a space of upwards of thirty years has there a single capital conviction taken place within several miles around. The sum of money required to carry into effect the desired improvement would be comparatively small, when contrasted with grants made to other places. Wherefore, your memorialists humbly pray your Excellency to take the matter into your immediate consideration, and respectfully urge the necessity and expediency of your causing an appropriation to be made of a fund adequate to accomplish the object sought for by your memorialists. And your memorialists will ever pray.

Sir, Office of Works, Dublin, 4th July 1834.

With reference to the Memorial from the Inhabitants and Fishermen of Kilmore for a Government grant of 1,500 *l.* for the construction of a pier on the coast of that place, I beg leave to report that it is extremely probable that all the good effects stated in the memorial would be produced by the construction of such a work; but I have every reason to believe that there are no funds at the disposition of the Irish Government which could be applied to the object.

The Board of Public Wotks, however, have a grant fund by the Act of 1st & 2d William IV. cap. 33, which enables them to recommend to the Treasury a grant to an extent not exceeding 1,000 *l.*, of one-half of the estimated cost of a fishery pier on the coast, when the other half shall be deposited or secured, provided the work shall be approved.

Should the parties be desirous of availing themselves of that provision, they should make their application to this Board.

I have, &c.

Right Hon. E. J. Littleton, &c. &c. &c. (signed) *J. F. Burgoyne.*

I think it would be beneficial, not only to the locality and fishing people there, but of the greatest importance to Liverpool, London and Bristol particularly, to have such a harbour. About 1,500 *l.* or 2,000 *l.* might be laid out there to great advantage, so that boats may be always afloat to save merchant vessels that are led into that bay.

2257. Would the improvement that you suggest consist in a safety harbour, such as would afford to shipping in every state of the tide the power of floating?—I should think it would; and by an outlay of about 2,000 *l.* any vessel could be saved, and it would enable boats to be afloat to prevent larger vessels going ashore, as there is water for any ship 25 fathoms from the present small fishing pier, built by the fishermen themselves.

2258. Have you turned your attention to the fisheries on that coast?—There is a very extensive establishment of fisheries, and in consequence of the small pier they have, they are not able to fish more than three months in the year, taking it altogether.

2259. Would the erection of a suitable pier and safety harbour be a great encouragement to the fisheries in that district?—Very great, indeed.

2260. Would you consider it desirable that a commission should be appointed by Government, as has been suggested by the Board of Works in their last Report, for the purpose of inquiring into the fisheries in Ireland generally?—It would be one of the greatest advantages possible to the whole country.

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Lunæ, 8° die Junii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Colonel *Henry Thomas*, called in; and Examined.

2261. YOU are a colonel in the army?—Lieutenant-colonel.

2262. Have you any suggestion to make to the Committee connected with the subject with reference to them?—I would beg to represent to the Committee, that a petition was presented to Government, in January last, for a "grant" in aid of the construction of a bridge over the Bandon River, and that the Lord Lieutenant, in reply, admitted the great public utility of the work, and expressed his great satisfaction at the amount of the sum entered into by private subscription, and also expressed the satisfaction it would give his Excellency to be able to recommend a grant for one-half the sum required to complete this work; but that the Act of Parliament, by which funds are provided for Public Works, is not applicable to the case in question. In furtherance of this opinion, the Commissioners of Public Works in Ireland, to whom the question was referred, declared that the sums to be appropriated by way of "grant" were applicable to remote places only, where there was a thinly scattered population, and no means of effecting such necessary improvements by individual subscriptions, and that Kinsale, from its population and locality, could not be considered to come within the meaning of the Act of Parliament. I would now, on behalf of Kinsale, beg leave to suggest, that although the population does amount to upwards of 7,000 persons, it has long been in a very impoverished and deteriorated state, from the want of that power which wealth commands to overcome the barriers that nature has interposed between it and the circumjacent country, more particularly to the southward, where the Bandon River, expanding its surface to a breadth of upwards of 1,000 feet, cuts off this large and populous town from advantages to which by its locality it is entitled, whether viewed in connexion with the capital of the country as a place of transit, or combined with the acknowledged capabilities of its harbour as a place of export, or as affording in itself a market for the varied productions of an highly agricultural district of country, extending to the south as far as the "Old Shad," and to the west as far as Baltimore Harbour, including the towns of Skibbereen, Roscarberry, Clonakilty and Timoleague, with the villages of Balliniscarthy, Kilbritain and Ballinspittle, and comprehending an area of not less than 180,000 acres. To effect a junction with the southern banks of the river, more in accordance with the rapidly advancing condition of society than is afforded by the present imperfect ferry, and thence to unite in a direct line the whole western coast of the county of Cork, is an object of vital importance to the town of Kinsale; and in order to facilitate the accomplishment of so desirable an object, the inhabitants, with the most patriotic spirit, have subscribed a sum of about 4,000 *l.* towards the construction of a bridge; and they confidently hope, that when it is recollected this town has suffered more than any other from the removal of the dock-yard, and all other public establishments, and consequent stagnation of commerce, its fair claim to consideration will be admitted, and that a sum of money equal to that subscribed by the inhabitants will be granted in aid of a work of admitted general utility.

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2263. Will not the county undertake its construction?—I have understood the county had not the power.

2264. Why not; how is it circumstanced; what reasons have you for imagining the county has not the power?—I presume, that had it been attainable from this source, the Government would not have been applied to; it is also, I believe, (for I am a stranger to such matters) attended with greater difficulty to obtain the concurrence of the grand jury to so large a grant from the county for the construction of a bridge, than for a great extent of road, the one being so much more expensive than the other in proportion to the surface it embraces.

2265. Would the bridge go over a river that divides two counties?—No.

2266. What is the sum necessary?—It is calculated it could be done for 9,000 *l.*

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2267. Your suggestion was, that the Government should give 8,000*l.* to 1,000*l.* subscribed by individuals?—No, 4,500*l.*, being a moiety of the estimated cost.

2268. The harbour is not in a situation to require improvement?—No; the harbour is a better harbour than that of Cork; the largest ships can moor alongside the quay; whereas they can go no farther up the Cork River than Cove.

2269. To what do you attribute the decay of the town of Kinsale?—To the removal of the national establishments that formerly existed there, and consequent withdrawal of a large expenditure and circulation of public money.

2270. It was formerly a Government depôt?—Yes, and also had a considerable dock-yard, where men-of-war were repaired.

Mercurii, 10° *die Junii*, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Mr. *Charles Tarrant*, Civil Engineer, called in; and Examined.

Mr. *C. Tarrant.*

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2271. ARE you the engineer of the Royal Canal?—I am.

2272. What is the extent of the Royal Canal in its direct line and its several branches?—Its direct line is 90 miles; it has two off-branches, one at a distance of a mile from the Broad Stone, two miles in length, entering into the river Liffey; a second branch from near Killachie to the town of Longford, the distance five miles. This town has been improved considerably in consequence of the canal; there has been one-fourth added to its extent in new and permanent buildings within the last four years; there has also been the introduction of two branch banks.

2273. Can you state the returns of the trade upon the canal?—I am not aware of the amount, but the rate is three-halfpence per ton per mile.

2274. Have any surveys been made for an extension of the canal?—Yes, there have been two surveys made by the late Mr. Killally, one turning from Blackshade to Athboy and on to Kells; this line would be of the utmost importance if executed, both as giving employment in cutting turf, the reclamation of a large tract of bog, and a considerable trade would be expected. The extent was about 28 miles, and the cost, I think, was about 79,000*l.*

2275. What was the next line?—The next line was near Tarmunbarry, by New Town Forbes, Mohill, and on to Drumshambo and Lough Allen. I think the distance was 34 Irish miles, and the cost was 206,000*l.* I have surveyed several lines, one from Tarmunbarry to Roscommon, a distance of 12 miles, the cost of which would be 43,000*l.* There was another line also from Lough Ree to Roscommon, a distance of about five miles, and I think the cost would be about 30,000*l.*; and one from Lake Bordany by Canedoe to Elphin and Lake Gara, the map and estimate of which I hand in. I beg to observe, that I have also the maps and sections of the two other lines, one of Mr. Killally, and one of my own.

2276. Will you produce them?—[*The Witness produces the Maps.*]

2277. Was there any application made to the Board of Public Works with respect to these surveys?—None.

2278. Was there no application for a loan of money?—There was.

2279. Was that application successful?—No, it was not; we could not obtain the money.

2280. Why was the money not to be obtained?—There was no Board of Public Works at that time, but only the Loan Commissioners, and their funds were exhausted. They gave 42,000*l.* to the canal at Ballinasloe. There was an application made to the commissioners before the Board of Public Works were appointed.

2281. Was any application made to the present Board of Commissioners?—I believe there was, but I do not know the particulars.

2282. Would all these lines, the surveys of which you have mentioned, be very useful to the country?—I think the last one would be very useful from Carnadoe Water to Lough Gara.

2283. How many Irish miles is that?—Seventeen and a quarter Irish miles, equal to nearly twenty-two British, at a cost of 64,204*l.* 2*s.* 8*d.*

2284. You state that you consider that line of canal would be very useful to the country?—It would.

2285. Will

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2285. Will you mention your reasons for considering that line in particular would be useful?—My reason is, that instead of navigating the river Shannon, you would navigate an inland cut, or still-water navigation, and where you avoid the uncertainty of a river navigation.

2286. Does it run through some of the richest land in Ireland?—Yes, part of i runs through very rich land; I suppose there is not finer land in Ireland.

2287. In times of temporary scarcity of provisions in Dublin, have not you principally depended upon the county of Roscommon to supply you?—We have.

2288. Do you then think that the situation of that canal would render that supply more easy?—Certainly.

2289. So that hereafter it would be impossible that Dublin could suffer so much from the scarcity of provisions?—Certainly, particularly with regard to potatoes. In the year 1828, but for the supply from the county of Roscommon, the counties of Dublin, Wicklow, Meath and Kildare would have suffered very much.

2290. You are aware that there is a very material difference in the returns of the tolls of the Royal and the Grand Canals?—Yes; there is a great difference in their extent, and the tolls of the Royal Canal are one-third lower than the Grand Canal.

2291. Do you consider that this extension into the rich county of Roscommon would increase, in a very great proportion, the trade upon the Royal Canal?—I do, very much, for it would bring the land into potatoe tillage; and, consequently, into grain; there would also be an internal or home trade, such as turf and bricks, particularly in the former, to Elphin, where fuel is very scarce.

2292. Is that a district of country which is now almost entirely given up to grazing?—Yes.

2293. How would you propose to raise the 64,000*l.* necessary for the extension of the Canal?—I have not considered that.

2294. Can you at all inform the Committee what would be the probable annual income derived from the tolls with this extension?—I think it would be equal in proportion to any part of the Shannon.

2295. What would be the increased return per centage upon the capital?—I think it ought to pay three per cent. on the money laid out, and four per cent. for a sinking fund from the time the line would come into operation.

2296. Would it yield an annual income equal to six per cent. on the money advanced?—I consider it certainly would.

2297. Upon that branch alone?—Yes; for you take in a line of country eight miles on each side of the proposed cut.

2298. You take in a great portion of Sligo, Mayo and Roscommon?—Yes.

2299. Would the Canal be navigable for other boats besides steam-boats?—It is not intended for steam-boats.

2300. The line passes through several loughs?—Luggage boats could navigate these loughs, as I proposed forming a track-way through them. The loughs are very trifling; perhaps the extent of loughs altogether is not above three miles; indeed, I may say two miles. An embankment may be raised on one side, and a track-way made as on the side of the rivers.

2301. So that the loughs may be pulled through?—Yes; they pull up to Grange Lough, which is four miles.

2302. What is the highest point?—The highest point is Lough Gara.

2303. What is the highest level above the Shannon?—I think it is 84 feet from the surface of Lough Gara to the bottom sill of the lower lock in Carragen Lake.

2304. Have you made a Report to the Royal Canal Board upon the subject of this line?—I have.

[*The following Report was then read:*]

Sir, Dublin, 28th May 1835.

In pursuance of the Board's Order, I herewith transmit a Map, Section and Estimate of the proposed Canal between Lough Gara and Carnadoe, near the river Shannon. This line takes in the rivers and lakes between these points, and is 17¾ Irish miles, (equal to nearly 22 British), in length, passing within about one mile of Elphin, and two of Balnagar and French Park, in the county of Roscommon. The river from Lough Gara to Bridogue Bridge to be made navigable, by widening and taking off the sudden bends on the north-east side of it; from thence to Lough Bally. The line departs from the river where it is circuitous, and shortly I propose navigating Lough Bally, and proceed from thence to the Turloughes of Mantua; after passing this part, the greatest difficulty presents itself through stiff clay, where there is an average sinking of 41 feet for about half a mile in length, at the termination of which there is a short embankment and a double lock. The line is favourable on to

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Lurgan or Ballyhooter near Elphin; this distance is about ten miles, and within one mile of Elphin. The cost is 44,920*l.* 18*s.* 4*d.* The line proceeds much more favourable from thence to Drummullen, navigating Cloonaker Lake and River, and on to Carrigen Lake, where the locks terminate; and to navigate this lock as far as Carnadoe Bridge or river, which communicates with the Shannon, the cost of which will be 18,406*l.* 14*s.* 2*d.*, from Elphin to this point, making the total cost 64,204*l.* 2*s.* 8*d.* for the entire line. I further wish to remark that the beneficent results arising from the drainage of ground adjacent to where the Canal will pass, may be calculated at a very considerable extent.

To Samuel Draper, Esq.
Royal Canal House.

I am, &c.
Charles Tarrant.

2305. Have you also furnished an estimate of the expense?—I have.

[*The following Estimate was then read:*]

AN ESTIMATE of a proposed CANAL from *Lough Gara* to *Carnadoe Bridge* and the River *Shannon*; to have 6 Feet in depth of Water, and 18 Feet broad at bottom, and 36 Feet at top, Water Surface.

Perches.	Depth or Height.		RATE.	AMOUNT.	TOTAL AMOUNT.
	Ft.	In.	£. s. d.	£. s. d.	£. s. d.
			EARTH WORK:		
120	3	–	In widening and deepening the river between Lough Gara and Bridogue Bridge - - -	1 3 –	138 – –
540	3	6	Ditto - - from Bridogue to Balla Bridge, and continued to the west end of Balla Bog - -	1 10 –	810 – –
280	12	–	Sinking through Balla Bog, and on to Lough Gara, in departing from the river - - -	3 10 –	980 – –
144	6	–	In dredging through Lough Balla	2 6 –	331 4 –
440	20	6	Sinking in Cloonkwin Bog - -	8 10 –	3,740 – –
220	18	9	Sinking in moor and clay through Mantua Turloughes - -	17 11 –	3,861 – –
280	17	–	Ditto - - ditto - - ditto - -	15 – –	4,200 – –
164	41	–	Ditto - - in clay through Athrow East and Raheen - - -	82 – –	13,530 – –
146	18	–	Sinking in clay through Athrow East, to be applied to embankment in Creive - - -	17 10 –	2,555 – –
336	5	6	Sinking through Gurthnacranow to the first lock, near the mearing of Cherryfield - - -	2 17 –	957 12 –
			Eight miles of track-way, forming and gravelling, from Lough Gara to the first lock - -	64 – –	512 – –
148	10	9	Sinking in clay and moor between Cherryfield and Lurgan - -	4 16 –	710 8 –
			To purchase of ground from Lough Gara to road at Lurgan	- -	672 – –
			MASONRY:		
			Two double locks, with bridges and lock-houses, &c. - -	- -	6,000 – –
			Three public road bridges - -	- -	1,300 – –
			One accommodation bridge -	- -	300 – –
			Three tunnels, six feet wide -	- -	240 – –
					40,837 4 –
			Contingencies & superintendence on the foregoing, at 10 per cent. - - - - - -	- -	4,083 14 4
			From Lough Gara to near Ballyhooter, an extent of 10 miles, and within 1 ¼ mile of Elphin, amount - - - -	- -	44,920 18 4
			EARTH WORK:		
948	4	8	Sinking in clay, moor and gravel, through Lurgan, Emlough, Curmular, Cumun and Creve -	1 11 4	1,485 – –
32	6	–	Of sinking in clay through Drumullen - - - - -	6 – –	192 – –
160	7	4	Ditto - - bog through Coolmeen	2 1 –	328 – –

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AN ESTIMATE of a proposed Canal from *Lough Gara* to *Carnadoe Bridge*, &c.—*continued*.

Perches.	Depth or Height.		RATE.	AMOUNT.	TOTAL AMOUNT.
	Ft. In.	EARTH WORK—*continued*.	£. s. d.	£. s. d.	£. s. d.
32	7 6	Of sinking in clay at entrance of Gloonahee Lake	4 – –	128 – –	
480	3 6	Of embankment to be formed for a track-way south of Gloonahee Lake	– 15 –	360 – –	
152	8 –	Of sinking in clay and moor through Glooncloss namore	5 10 –	836 – –	
120	2 9	Of embankment to form a track-way through Clooncloss namore Lake	– 15 –	90 – –	
104	11 6	Of sinking in clay through Cloonglossenybeg	8 15 –	858 – –	
40	4 –	Of embankment in ditto	9 5 –	370 – –	
86	8 –	Of sinking in red bog	2 7 –		
36	7 –	Of sinking in clay at the entrance of Clavrigan Lake	5 5 –	189 – –	
75	3 6	Ditto – – in clay and gravel on each side of Carnadoe Bidge	3 – –	225 – –	
		Eight miles of track-way be formed and gravelled, from the second lock to Carragan Lake	64 – –	512 – –	
		To purchase of ground from road at Lurgan to Carragan Lake	– –	1,375 – –	
		MASONRY:			
		One double lock, with lock-house	– –	2,600 – –	
		Two single locks, with ditto, &c.	– –	3,100 – –	
		A harbour to be formed at Lurgan	– –	600 – –	
		One public road bridge at Carnadoe	– –	800 – –	
		Four – – ditto – – ditto	– –	2,000 – –	
		Two accommodation bridges	– –	600 – –	
		Three 12-feet tunnels	– –	600 – –	
		One 6-feet – – ditto	– –	80 – –	
				17,530 4 –	
		Contingencies & superintendence, at 10 per cent.	– –	1,753 – 4	
		Expense forming line from Lurgan to Carnadoe	– –		19,283 4 4
				£.	64,204 2 8

2306. Are you acquainted with any of the tributaries flowing into the Shannon?—I am acquainted with the Boyle Water.

2307. Would you propose to join the Boyle Water with the Shannon?—It falls into the Shannon at present.

2308. Is it navigable to where it falls into the Shannon at present?—It is navigable; but the certain obstructions which require removal, such as gravel shoals, ledges or rock, the expense of which has been estimated by Mr. Rhodes at something about 5,000*l*.

2309. Could you not improve that navigation?—Certainly.

2310. You have seen the evidence of Mr. Mullins, relating to the Boyle Water?—I have.

2311. In his evidence, he says, that for 6,000*l*. he could extend the navigation 40 miles?—I think that is impracticable.

2312. Do you think that estimate is completely erroneous?—I certainly think it could not be done for 6,000*l*.

2313. Are you aware that the only portion of the Boyle River which can be considered navigable is from the Shannon to Lough Key?—Certainly.

2314. You are aware that the river is not navigable from Lough Key to Boyle?—Certainly not.

2315. Nor from Boyle to Lough Gara?—No.

2316. So that the estimate of Mr. Mullins must have been a mistake?—I should think so.

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2317. Would this canal, in the line you propose, run parallel to the Boyle Water, or within any considerable distance of it?—No, it runs in a westerly direction from Carnadoe to Lough Gara, through that portion of the Maghana of Roscommon, known as the Talsh district.

2318. What is the distance from the Carnadoe River to the Boyle River up the Shannon?—It may be about 12 miles.

2319. Then there would be from the Boyle Water to Lough Key, what distance?—About six or seven miles.

2320. Then from Lough Key to Boyle, I believe, is somewhere about four miles?—Yes.

2321. What is the distance from Boyle to Lough Gara?—About seven or eight miles.

2322. Looking to the general interests of that district, and with a view also to the relative expense of both undertakings, which should you consider most desirable, this canal with respect to which you have given evidence, or the perfecting of the Boyle Water navigation?—If the cost of the two undertakings were equal, I should think the one I have laid out would be preferable; I cannot say what it would take to make Lough Gara navigable to Boyle.

2323. Would you get any additional country in the line by the Boyle Water being rendered navigable?—Certainly not; it would confine itself to Lough Key. The other line goes through the interior of the country.

2324. Would the proposed canal afford increased facilities for draining the district?—It would, particularly in the neighbourhood of Mantua; I suppose it would drain there at least 400 or 500 acres.

2325. In your opinion, would it not be just that inasmuch as the land would be so benefited, that the proprietors should be charged with a certain portion of the outlay for that purpose?—I do, for I think the proprietors all through the country where that line passes through would be equally benefited.

2326. At all events, that they should pay a fair assessment, to be ascertained by means of a jury?—Yes.

2326*. You think that would be fair upon the landlords?—I do.

2327. Are you aware whether any one of the landed proprietors, who would be very much interested in this improvement, is willing to come forward to assist in defraying the expense?—I have no doubt that Mr. Grace, at Mantua, would be very willing to do so.

Captain *George Harris*, called in; and Examined.

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2328. HAVE you any suggestion to make to the Committee respecting the reclaiming of waste land in Ireland?—I have.

2329. Will you have the goodness to state it?—It is upon the subject of the growth of plants in the bog lands of Ireland, as substitutes for hemp and flax. It appears by Custom-house Parliamentary Returns, that the importations from Russia, Holland and America into England, in the years from 1814 to 1823 inclusive, are as follows:—

Hemp - -	5,135,804 cwt. - - -	£. 9,198,762
Flax - -	4,297,953 cwt. - - -	11,595,906
Flax or Linseed,	12,032,715 bushels - -	5,264,391
Linen Yarns - - - - - -		916,192
Manufactured Linens - - - - -		1,015,119
		£. 27,990,370

I may also state as a fact, that during the War one only out of our four royal rope-yards paid 11,000,000*l.* in 14 years to Russia for hemp. This enormous (and still continuing) expenditure by Great Britain for the exclusive benefit of foreign powers is surely unwise and evil policy, when I am prepared to prove that so vast a commerce may be thrown into Ireland, our settlements and colonies, and that thousands of the population of Ireland, the Coast of Africa, the East and West Indies and the Canadas might be advantageously employed, to render the mother country independent for the supply of these substances. My reasons are as follows: 1st. The fibrous material made use of by me, such as the Phormium Tenax, Musa Textilis, Urtica Tenacissima and Pita or Silk Grass, with numerous other plants of the same genus, are now growing in her settlements and colonies exuberantly

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exuberantly. 2d. The fibres thereof are much stronger, and can be made softer than either hemp or flax. 3d. The fibres are so tough and so divisible, that they are applicable to the making of the strongest cable and the finest fabrics. 4th. By the use of them, the produce of the British settlements and colonies are consumed instead of that of foreign lands. 5th. That, measure for measure, it exceeds, not only greatly in strength, but is 20 per cent. lighter, by which ropes of less dimensions may be used, thereby causing a saving, not only in stowage, but in the size of blocks; and 21 same class vessels could be rigged from the same quantum of material as is now required for 20. 6th. No rotting or maceration in water is used to get rid of the pulp or coating which covers the fibres, as in the case of hemp and flax, to get clear of the ligneous particles, by which not only the fibre in general is deteriorated, but the strength thereof rendered unequal by the impossibility of making the process alike in all its parts; cordage made thereof supporting in one part of a coil a strain of five tons, and in others perhaps not more than four or even three, so that in fact the whole length of the coil when rove, can only be calculated at the lowest resistance. Little or no dependence can be placed on such cordage; for seamen, knowing that a rope of certain dimensions ought to bear a certain strain, have a fallacious and too frequently fatal confidence, and not only lose their lives, but their vessels also. 7th. The Phormium Tenax and other plants are easy to cultivate, and may be grown in any quantities in the South of England and Ireland, especially by the sides of rivers in large or alluvial soils, by which a large population may be employed, and thousands of acres now lying waste may be brought into cultivation, producing those riches which now greatly benefit Russia. 8th. These substances are all perennial, not like hemp and flax, annuals; therefore requiring less labour in culture, and producible by Englishmen; thereby making England altogether independent of the caprice of foreign markets.

2330. Will you state the names of the plants which you propose to substitute for hemp and flax?—They are called Phormium Tenax, Musa Textilis, Urtica Tenacissima and Pita or Silk Grass, and the White or Silk Grass. In all there are about 38 varieties of them. In order to prove that they can be manufactured into linen, I have an affidavit of a manufacturer at Barnsley, and I also beg to produce some specimens of the linen yarns which he refers to in his affidavit.—[*The Witness produced several specimens of linen yarns and manufactured linens, made from the plants above named.*]

2331. Are there specimens from all the varieties of plants you have named?—Not all, but several of them.

2332. Are these plants in growth at the present moment?—Yes; I will also produce some leaves cut from plants which were grown in my garden within this fortnight, one half in fibre and the other half left out of fibre. This is a specimen of the Phormium Tenax, reduced to a thin yarn for fine purposes.

2333. Have you tried the growth of any of these plants in Ireland?—Yes; I have been in correspondence with Mr. M'Cabe, and I rather think he has got a plantation of it of about an acre; but within the last two years I have dropped the correspondence, and will not speak positively of that.

2334. In what part of Ireland does he live?—Within ten miles of Dublin, at a place called Stackpool.

2335. Have you yourself tried the growth of these plants?—The Phormium Tenax and the Musa Textilis I have.

2336. Have you tried them in bogs?—I know they will grow in bogs; the Phormium Tenax is peculiarly adapted for bogs; it is termed the "Bog Lily."

2337. You have no doubt it would be successful if adopted in Ireland?—I have no doubt it would be successful, particularly in the South of Ireland.

2338. Have you been in Ireland yourself?—I have.

2339. Have you examined any of the bogs in Ireland, with a view to their reclamation or improvement?—I cannot say I have particularly examined them, but I have not a doubt that wherever a bog is, these plants will thrive.

2340. Have you not a patent yourself for the manufacture of these substances?—I have two patents; one for the making of rope and sail-cloth from these plants, and the other for making flax; that flax from the Phormium Tenax in particular, so perfectly like silk, that you would hardly know the difference.

2341. Is there a sale for those articles?—A great sale.

2342. It is going on now?—Very much. Mr. Wilson, a manufacturer of Barnsley, has above 100 mills at work. I have had these specimens from Barnsley direct, within a fortnight or three weeks.

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2343. Have you endeavoured to cultivate the plants yourself?—I have. My object was to impress the company that was formed with the importance of it, and I proved that one acre planted with the Phormium Tenax would produce more flax than three acres planted with the present flax plant.

2344. Have the plants produced any seed in this country?—No, there is no occasion for seed, for they increase and multiply themselves at the roots, which are divisible. You break off the roots and transplant them again.

2345. When you say it is divisible at the roots, does it throw up suckers?—No. It comes up like a fan, and if you want to make a number of plants from the mother root, you take it up at the spring of the year, and you take off the fan plants and transplant them.

2346. At what time do you put them in the ground?—In the autumn.

2347. Can you state to the Committee that this plant has been grown with success in any bog in Ireland?—I can positively state that Mr. M'Cabe has written to me several letters on the subject, and in one he told me that he had cut above 300 leaves from the mother plant, a specimen of which he sent me, and they were seven feet long in a twelvemonths' growth.

2348. Can you state to the Committee the nature of the soil on which it grew?—I cannot, but I believe it was in a damp soil.

2349. Can you state to the Committee the nature of the soil which would be required in your opinion for the successful growth of these plants?—On all alluvial or boggy land, particularly near to the sea, they thrive the best.

2350. Alluvial land, subject to irrigation?—Yes; they will grow in the water in fact. They do grow in the water in their native climate, New Zealand; you may run your boat in amongst them.

2351. Do they require considerable nourishment?—Yes, chiefly water.

2352. Do they require much attention and cultivation?—Not the slightest; once planted, they will increase and multiply themselves; at least as far as my experiments go.

2353. Are they much affected by the vicissitudes of the seasons?—In cold weather they may be affected. I do not think the Phormium Tenax is what you call a hardy plant; nor should I say that it would grow in the North of Ireland, but it would grow decidedly in the South. I think all the Urticæ, that is seven varieties of the Urtica, would grow in the South of Ireland.

2354. Are you aware that the climate of Ireland is much milder and more humid than the climate of England?—I am aware of it.

2355. Why do you not extend your observation to the Western as well as to the Southern coast of Ireland?—They may grow in the Western as well as the Southern coast of Ireland.

2356. Would they grow on the banks of rivers, subject to flood tides?—Yes; those are the very places where I should plant them.

2357. On the banks of the Shannon for instance, and the rivers in the neighbourhood?—Yes. There are two companies now formed in this country, one for the manufacture of rope and sail-cloth, and the other for the preparation of flax similar to this specimen.

2358. How would you get a supply of plants for cultivation in Ireland?—From New Zealand. The method we are adopting to get our supplies is, that having sent an agent out to New Zealand, we direct him to send home plants in every ship which brings home the flax, and we have 100 tons of flax now coming home.

2359. How would you get the plants until a supply could be obtained from New Zealand?—There would be a difficulty, no doubt, in getting the plants at first starting.

2360. You stated that these specimens of linen cloth were manufactured in England from these plants?—Yes, at Barnsley.

2361. Can you give us any idea what the relative value would be of cloth made from the Phormium Tenax, and of the same cloth made from the common hemp?—Yes, No. 1 has always cost the Government from 18*d.* to 20*d.* a yard, and the manufacturer's mark upon that is 8½*d.* The house that is engaged with me is a very respectable house in the city, Messrs. Swansborough & Cake, and we calculate that upon an average we shall come under the present price of linens about one-third, particularly with the heavy goods, as they are termed.

Mr. *John Featherstone*, called in; and Examined.

2362. WHERE do you live?—Within two miles of Cunnegad, in the county of Westmeath.

2363. Are you a landed proprietor?—I am.

2364. Are you possessed of bog land?—I am, and of mountain land.

2365. Have you improved either description of land?—I have both.

2366. Have you done so successfully?—I have very successfully latterly, since I began to use the moveable rail-road, the same as that used upon Chat Moss.

2367. Will you explain to the Committee the superior advantages of using the rail-road?—The nature of our bogs, which we call the red bog in Ireland, which the Scotch call a blue moss, and the English call a moor, is, that it requires after it is drained a certain calcareous matter to be brought to it, and the moveable rail-road is the cheapest mode we have found out yet of bringing it. We used to improve formerly by barrows, and so got in the gravel; in a frost by carts, and the carts went in and out as well as they could; now we have a regular system of getting into the bog by means of the rail-road, no matter what the weather is; if it has been raining for thirty weeks it makes no difference, we can get in by the moveable rail-road, and when once we have got in the gravel, and the bog is drained, it becomes mostly as good as upland, and we can till it as freely as any upland; it becomes just as solid.

2368. Can you state to the Committee the expense you have been at in improving, first the bog land, and secondly the mountain land?—The red bog I commenced with first. My reason for commencing with the worst was, that my neighbours, who were all sceptics, would say, if I commenced with the low-lands, that they could do that themselves. I commenced with what they all allowed they could not do, and that stood me in 13 *l.* an acre. I include in that the engineer's expenses, the deputy engineer's expenses, and all the wear and tear which I thought the rail-road had undergone. I found, after excavating a gravel hole, some limestone, and I gave myself credit in that calculation for the lime-stone I found; formerly I was obliged to lay out so much money in quarrying lime-stone. The next that I commenced was part of the red bog which was cut away, the part which we call "cush," where there was a great deal of sedge and moss growing, and that stood me in 6 *l.* per acre.

2369. Is that land as valuable as the former when reclaimed?—It is three times as valuable.

2370. What was the land in both cases worth before the improvement, and what is it now worth after the improvement?—The red bog was worth nothing, except for snipe-shooting.

2371. What is it now worth?—I value it at 1 *l.* per acre.

2372. Could you get 1 *l.* per acre for it?—Freely. Some land of the same sort at Ashton-under-Lyne, which was finished by Mr. Read, he offered Lord Stamford two guineas an acre on the completion of it, and Lord Stamford refused it. My land is as good, with only the difference in the position of the two.

2373. Will you state the value of the other land?—I am satisfied, in a country that wanted meadow land, they would give 3 *l.* for it; in the county of Carlow, for instance.

2374. What would it let for in your county?—I could make 2 *l.* an acre for it, if I were a farmer and let out land, for meadow; but it is not the practice of my business to do so.

2375. Can you state to the Committee the cost of improving mountain land?—I am now going from Westmeath into Galway; it is the mountains of Galway in the neighbourhood of Woodford I am acquainted with, that is, stretching up from the Shannon towards Mount Shannon, a wild country running into Clare. The flats of these mountains do not grow heath; they are covered only with long sedge, which the lower orders call "myng," and it is used very much for thatching. It is very superior to straw, and will last for many years. When the great waters are let off from those flats, they immediately give a crop without any calcareous matter being brought. They are what we call alluvial lands, and the oat they grow is so very fine, and of a rich gold colour, that if we can possibly get it down to the lowlands we sell it freely for seed oats, but the roads being so bad, we put it to the purpose of illicit distillation. It is a great deal cheaper to distil it than to bring it to market, for we could only bring a small sack at a time, and we distil it on the spot at once, and on that account very little of it finds its way into the market.

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2376. Do you include yourself, when you say, "we apply it to illicit distillation"? I do; I am a grazier, not a farmer, and most of my mountain lands are under cattle; but when first I went there I found part of it settled, and I tried in vain to stop that illicit distillation. I found it could not be done, and in the course of going over the ground I found those stills at work. At almost every cottage, men frequently brought me out whiskey to drink, and I knew my life would not be safe if I did not taste the whiskey, because that was a pledge that I would not give information. I therefore tasted the whiskey, and said nothing. Those were the habits I found in that part of the county of Galway. The landlords are rather inclined to have that illicit distillation going on, because their rents are better paid by it. My rents I found a great deal better paid in consequence of it; and until roads are made in that country it is impossible to put it down. If there were 50,000 troops, they would not be able to put it down, for it is a benefit to the landlord to keep it up.

2377. Is there a great deficiency of roads in that part of the country?—There are no roads at all. I was obliged to take my carts to pieces and carry them on horses' backs, and then I made roads through part of my own mountain.

2378. Should you not consider it fair if roads were made through that country, that a proportion of the expense of such roads should be contributed by the landlord?—Certainly.

2379. And a compulsory power for that purpose given to the Board of Works?—It would be a great improvement.

2380. Would the landlords object to that compulsory power being given?—A great number of them would, for it is a very rare thing to find a man of any class inclined to join in making improvements in that country; he opposes it.

2381. How do you account for that state of society?—For instance, when I required to make 11 miles of meer, instead of joining me in it, my neighbours said I ought to be very thankful for being allowed to do it. In fact, the lands were all in common, and the tenants were receiving a benefit from them, and I found great difficulty in satisfying them. I speak of the mountain country; there are no gentlemen residing in that mountain country, and the people are in a lawless state.

2382. Have there not been some roads lately passed through that country?—There are roads making in some places; but my neighbour, Mr. Sampson, has land 20 miles in circumference, and there is nothing but a pathway and only two farmhouses upon it. I have 11 miles, and there is no road near us.

2383. What is the nearest road for you to carry your produce and manure?—We have what are called mountain trackways within two miles of it.

2384. What is the nearest public road?—The Derrybrun road is within six miles.

2385. Is that the nearest?—Yes.

2386. Before the Derrybrun road was made, what was the nearest road then?—There was an old road that went by the Shannon, but the bridges were always broken, and therefore you could not call it a passable way. You must wait for the flood to subside if you travel the road, and then be in danger of losing your life if you passed it. That was within four miles of it, but it was not what you call a passable road.

2387. Did you or any of the neighbouring gentry ever apply to the grand jury to make a road through this country?—There was an application to open this line of country, but the grand jury set their faces against it, because they would be assessed with keeping up these lines. They said they would oppose them in every way in their power, because they said they should have to keep them up afterwards. If they were offered a present of the money they would not take it to open the line; they said so.

2388. But surely the proprietors in the barony would be so much interested in having these roads accomplished, that if they were the parties alone that would pay, they would not object to such a presentment passing the grand jury?—They unanimously wished it to pass, but they had only the power of proposing; the grand jury had the power of annulling; and when those presentments come before them, they say, "We will not grant any of those, because we shall have to pay for the keeping up a road."

2389. Are you aware they would not have to keep them up?—The Act of Parliament, I believe, makes them liable.

2390. In fact, the proprietors wished the roads to be made?—Yes.

2391. Are

2391. Are you aware that it is off the barony, and off the barony alone, that the sums for the repair of these roads can be carried?—The grand jury deny that.

2392. Were you in the grand jury room on that occasion?—Yes.

2393. Did you hear that stated by the gentlemen of the grand jury?—Yes.

2394. Do not grand juries frequently refuse to make presentments for a district of that description, from the consideration that the landlord in many cases ought to make a road for the improvement of his own estate?—In great measure the landlord will be assessed in that barony, for the greater part of the barony may belong to him, and therefore he will actually pay it.

2395. But do they not refuse to make presentments from that consideration?—No, I do not think particularly on that ground; the ground I heard them state was, that they would have to keep it up afterwards.

2396. You said the landlord would be obliged to pay it if taken off the barony; are you not aware that it is the occupying tenant who pays it?—Yes, the landlord does not pay it himself.

2397. It is a charge made after the tenant has entered on his tenure, and the landlord does not allow it?—Yes; but at the same time the tenants are most anxious to assess themselves for that purpose.

2398. Are you aware of applications for new roads being resisted on the ground that the old roads are kept open even though unnecessary?—No.

2399. Has not that been so in the county of Clare?—I do not know much of the county of Clare; it is the county of Galway I am particularly acquainted with.

2400. Have the landlords in that part of the country to which you refer the pecuniary means to make roads?—They are far from having the means; great poverty exists among several of the landlords.

2401. Do you not attribute a great deal of the evils of Ireland to the fact of the landlords being, generally speaking, in distress?—I think they are greatly distressed; but I attribute a great deal to their own indolence and supineness towards carrying on improvements, and a great dislike to those who do carry on improvements.

2402. Are you then of opinion, upon the whole, that in order to open up this district effectually there must be a compulsory power of making those roads lodged with some Government Board, with a control over the grand jury?—I have not the smallest doubt that if there is not a controlling power, the grand jury never will open the country.

2403. And you are of opinion ought not the Government to contribute to the expense of making the roads?—Yes, the landlords could never make them in some districts.

2404. Are you of opinion that in other districts in Ireland, whatever the case may be in Galway, that the landed proprietors are anxious to make roads?—Yes; I know that in the county of Clare Mr. Maliney is anxious to open the country: he does not spare his purse or his person to open the districts of his neighbourhood. He has taken pains with the Galway districts, as well as Clare, and there are a number of gentlemen who have exerted themselves very much; but it is of the body of gentlemen in that district that I am speaking.

2405. To what extent do you think the Government ought to contribute to the expense, one-half, or one-fourth, or in some instances the whole?—I think seldom the whole; half, I think, is in general a fair proportion in wild districts, where there are no gentry inhabiting; for in those mountain districts, having no roads, no gentleman will reside. They live down in the low country, and they do not care what becomes of the mountain district.

2406. You would give a Government Board not only the power of compelling the execution of such a road, but for directing the line they should take?—Yes, and then you would have the money honestly laid out.

2407. Will you state to the Committee the expense attendant on reclaiming mountain land?—I am in a great degree paralyzed from the difficulty of getting limestone and gravel, which we have within a mile of us; but we cannot get at it. My neighbour, Lord Riverston, has a beautiful limestone quarry, and he would not let me take a stone out of it, and he would not take a stone out of it himself. I offered to buy it, but he would not sell it to me. I thought that my men would get at a limestone quarry of Lord Riverston, and in that I was disappointed. I then thought he would allow me to take it at a certain charge, but he would not do that; so that limestone and gravel are both out of question. Then I built large stalls, and what lands I have reclaimed are by means of the manure from those

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stalls; but the mountain flats were reclaimed for one-third what any of the other ground was.

2408. Where there was limestone?—Yes, or without; they are what are called alluvial those flats, and there is the finest of timber; when we get the water drained off, we find trees with a ton of timber upon them lying wonderfully thick, and for ten-pence a day, a man will show you what eight men can raise. The frost does not lie where these trees are, and with a long spit, by going out early in the morning, they will find out which is most valuable. In some cases the trees are very valuable, such as the deal and the yew, and others are less valuable. These countries can be cleared for very little.

2409. What is the rent of the land?—A few tenants pay five shillings an acre for what they can till, and they have a district for the grazing of their cattle.

2410. You have stated that limestone and gravel was within a mile of you?—Yes.

2411. Do you consider it possible that you could cultivate the land profitably to yourself, drawing the limestone and gravel a mile?—No, I do not think I could; but there is limestone found in the limestone gravel, and the carts going either to market or for lime could bring turf, so that the carts would never go empty.

2412. That land you reclaimed I suppose burns red ashes?—No, the red bog will not burn.

2413. The mountain land burns red ashes?—It will, the mountain is alluvial land and produces any thing; the oats of a beautiful gold colour and an enormous crop; but what is the good of it? you cannot send it to market.

2414. You are speaking of the land in the valleys between the mountains?—Yes.

2415. What observations would you make upon the mountains themselves?—The mountains are capable of improvement also, and the Carlow people, who have a very bad description of mountain, came up to settle there, and they preferred cultivating the hills, to our great astonishment. They are a far more industrious race than any I have met with in Ireland, but being strangers there was a prejudice against them. They adopted improvements; for instance, they put their corn on stones, that the mice might not destroy it.

2416. Have you seen the improvements made by the Trappists near Mellory?—No, but the Trappists came to see mine, and pronounced that field No. 1 and No. 2 would be the best; they said these would be the best fields, because we were ploughing in gravel and amalgamating it with the soil, and it has run to the sod quicker than any other fields.

2417. What experience have you had of that?—It is now two years old.

2418. You consider it is coming into grass quicker?—Yes, the discovery at Chat Moss was like a sun bursting upon us all. We can now take a crop from the land in a year, and we can leave it as solid that our horses and carts can go upon it as freely as upon the upland.

2419. Will you state to the Committee the process of bringing a bog into cultivation, and the advantages by which your process is peculiarly distinguished?—The first step is to ascertain the number of acres you wish to bring into improvement, say 50 acres in a year. We make a boundary drain of three feet deep and four feet wide, made in a particular way, so that it is not inclined to close in. The sod we take out of the drain is thrown off at the sides, that there may be no pressure upon the drain, and it is made so that the water may run in an angle to the bottom of the drain instead of running directly over it. Then there are drains cut 66 yards asunder, and dividing the 50 acres into a certain number of fields, say eight or ten, and we number them, Nos. 1, 2, 3, 4, and so on, so that if I am at a distance I may be written to to know what is to be done with such and such a field; and then we make a kind of hollow under drains. The sods which are taken out are baked for six weeks in the sun and then laid down again, so that there is always a drain running through the field.

2420. Are they open or close drains?—They are covered at every five yards, that is, every English perch. They may be about 2½ feet in depth and 18 inches wide. The next operation is the scarifier which is drawn across the field, so that when the plough is applied it may not break into large flakes, but into small pieces. When the ploughing is finished, which is executed by one horse shod with pattens, which is used in the lowlands to prevent the horse sinking, there is a cutting roller applied drawn by three horses, assisted by a large wheel, and that cuts it into pieces about the size of three inches I suppose. The harrow immediately operates, and the

the harrow would not operate in its close state; and we then throw it into inclined plains, put in the gravel and sow with seeds; so that instead of waiting for two years we do it in two months. We do 50 acres a year, and we frequently have it so far advanced that we get crops off it that summer.

2421. What is the depth of the bog?—In some places from 20 to 30 feet before we reach the gravel.

2422. Does the bog sink much?—It has sunk three feet now, and it is going down. The stones are descending very rapidly, and each year it is becoming more dry. There is no doubt the doctrine of these bogs being wetted from springs has been a false one; it was from the capillary attraction that they were kept in that wet state. The more bog that is about, the more miasma it produces around; we find the place becomes damaged from it. It was always held that those bogs were kept wet in consequence of springs that were running underneath; and there were very deep drains commenced by several proprietors of land to drain the bogs, and they did not succeed. Then there was another doctrine, that it was by capillary attraction that the aquatic plants held the water, and I am satisfied there is no doubt of the truth of that, for destroy the aquatic plants, and it becomes dry. We met with very few springs in the course of our operations, and we have made the bog as dry as this room.

2423. It was supposed there was a certain kind of bog which was kept wet by the springs?—The general bogs in Ireland are supposed to be made by the springs. Looking at all the improvements which prevailed before the Chat Moss improvement, they attempted, by heavy drains, to improve the bogs. I never saw one attempted in any other way.

2424. A peculiar distinction of your process is, that it takes off the water by superficial drains?—Yes.

2425. Have you found you have been over-draining the country?—No.

2426. Before you adopted that plan, did you find you had over-drained?—No.

2427. Are not some descriptions of red bog very dry?—No, the red bog is always wet. The Cush is a blackish bog, and that is of a dry nature, but at the same time would not give a crop except by this process. The second description is the Cush, which can be improved at from 5*l.* to 6*l.* per acre, and left finer than most of the uplands of the country: a great deal finer than most of the land in the King's County; and it requires no drainage except the forming of it into fields, and throwing it into inclined planes, so that the water can get freely off.

2428. Do you mean by inclined planes, giving them a fall?—Yes; throwing the fields into 16-feet ridges, and Macadamize it as if it was a 16-feet road.

2429. What would that land be worth?—Three pounds an acre in the King's County, where meadow land is scarce.

2430. Is there any inclination in the land, so improved, to return to its former state?—No; it would be as easy to bring saw-dust into deal boards again.

2431. You stated you were in the habit of reclaiming 50 acres in a year; what is the capital required for that reclamation?—As to that, I could not speak particularly; I was released from many of my expenses by means of the rail-road. In the first place, I was able to work men instead of horses, and I consider that was a grand saving. I think you could keep three men cheaper than one horse, and my property became safe when I commenced these large works. I never had a sheep taken from me, or suffered any of those trifling thefts which they were in the habit of committing when unemployed. Every thing is in peace and quietness. I have now a small number of horses; most of my harness, which was a great expense, is all gone; I have hardly any wear and tear of harness; I have very few carts. I carry on a very large farming establishment, and I have only seven horses, where I used to keep 14 before.

2432. Can you inform the Committee how many acres you have reclaimed altogether?—There will be 150 acres finished this autumn.

2433. How do you describe your rail-road; are they moveable?—It is a copy of the Chat Moss moveable road; it is in a frame-work of timber, with two cross stays of iron, to prevent its going out when the weight is upon it; there is a saddle of iron upon the angle of the timber, and one goes into the other, so that it cannot sink, no matter how soft the substance you put the rail-road upon.

2434. What are the description of carts that travel upon the rail-road?—The same as the waggons used upon any of the rail-roads in this country; we draw these by men and horses, for we find there are such a number of men wanting

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employment that I thought it better to give them employment instead of horses, and they are delighted with it, and have so many perches given to them to work upon the rail-road. Land is improved by putting limestone upon it, and there are so many perches of the rail-road given to the men to draw limestone.

2435. What do you pay for task-work, for drawing limestone, on the rail-road?—I have not paid any one task-work; I am an enemy to task-work, till the men are well instructed.

2436. What is the cost of the railway itself by the perch?—Fifty-six shillings in Ireland; you can make it cheaper in England, because we are obliged to bring it from Wolverhampton, and therefore the transfer of it is expensive.

2437. That is the double perch?—Yes.

2438. The Irish or English perch?—The Irish perch; it comes to 10 guineas per ton from Wolverhampton.

2439. The 13 *l.* which you have stated as the expense of reclaiming the red bog, does not include the preparation for the crops?—Yes; all the preparing of it, but at the same time there should be no calculation from that, because we do it considerably cheaper now; all the men were colts; I was a colt myself, but now I know my work, and the men know their work, and now we do it much better.

2440. When you speak of 6 *l.* as being the expense of reclaiming the Cush, does that include every expense till the seed is put into the ground?—Yes; every thing, and you will find you can do it on cheaper terms.

2441. What is the crop you first sowed upon that land?—I sowed rape at first, but I found it grew so luxuriantly that it killed the sheep, and I have grown none since; it became too succulent.

2442. Then you let it go into grazing?—Yes, immediately.

2443. Have you ever sown a crop of wheat?—No; I am a grazier, not a farmer.

2444. Would those lands grow a crop of wheat?—Yes.

2445. Immediately on their preparation?—Yes; if there was active manure applied to them, but I would not recommend such crops.

2446. What sort of manure?—Dung from the farm-yard; where I got the gravel out of the hole, I put a square of offices, by the advice of the engineer, to produce winter manure to keep up the improvement.

2447. Then for the purpose of having a crop of wheat it is necessary that manure should be put upon the land?—Yes; active manure.

2448. I believe there is no sea-weed in your neighbourhood?—No.

2449. Have you seen it tried?—I have seen it tried on the Western coast, and there the effect is very great.

2450. Do you conceive, according to your system, that with the cutting you give the land, one green crop is sufficient before laying it down to grass?—It is ample; and I would show it against any land in the county of Westmeath, that which we have laid down this year and last year.

2451. Have you laid down any bog land with fern?—No; I know that grass, and I know it to be a bad thing for this kind of improvement.

2452. Will you state why you think so?—Fern grass is nothing more or less than the waste grass, and you may see it growing in the bottom of the bog-drains, and is therefore an aquatic plant, and only fit for wet lands; but the sheep will avoid it in every way they can if they can get our more approved grass, such as Timothy; that is where our farmers have all failed, by not giving themselves the trouble of getting the good kind of grasses; it stood me in 150 *l.* for grass-seed alone in laying down the bogs.

2453. You state the cattle would prefer all other grasses to fern?—Yes; I say of the improved kind, such as Timothy and Fox-tail; it is a common observation to say, that is a sour grass, because the proprietors do not know how to treat it. The Timothy grass the cattle will not eat, from the ignorance of the proprietor, for it is not from the quality of the grass, but from the ignorance of the man who handles it. The Scotch, who are held up as such farmers, I have heard them say the cattle will not eat it.

2454. Would it surprise you to hear, that in one farm, 10 or 15 cattle being driven into the yard, throw away all other grasses with their horns, and fasten constantly upon the fern, giving up every thing else for fern?—It may so happen in consequence of the state of the making up that hay; hay that is heated in its sap, cattle will prefer, more particularly horned cattle, to any other. If it is heated from rain, they will dislike it, but not if it is heated from its sap; that grass is

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very likely to have been heated from its sap, being of a succulent description, and that might have caused the cattle to prefer it.

2455. Have you ever tried the growth of plants?—No; I have tried hemp.

2456. Has it been profitable?—No; it is the destruction of the land. No land, if it is not alluvial land, will stand the growth of hemp. It is 15 years ago since the Farming Society of Ireland offered as premiums to grow hemp in extent, and I was one of the unfortunate people who entered into it. It took us two or three years before we brought back the land that grew it; it produced a very beautiful crop certainly, but it took us many a load of dung before we brought the ground back to its original state.

2457. Has flax the same effect?—Flax is a very exhausting crop, but not to the same extent as hemp.

2458. Do you think that hemp would exhaust the bog lands in Ireland?—I am of opinion that what you call the bog would take a series of years before it would grow it.

2459. When once in a condition to grow it, do you think that hemp would exhaust the land?—It might not if it was in a fit state to grow it, but it would take 20 years. We have had much conversation about Botany Bay hemp, and other plants; I am conversant with those plants, and I know if you put them into a poor soil they do not generate as they ought.

2460. Have you tried any of the different descriptions of plants which have been referred to by the former Witness?—Yes; particularly Botany Bay hemp, I am acquainted with.

2461. And you found that did not succeed?—They will grow in the garden; you can make Indian corn, or any thing else, grow in the garden, but not make it a crop off the land. The most tender plants, with a little care, may grow in a garden, but to say I will grow them as crops in the field, would be madness. With regard to the soil, my garden is returned in the assessment of the county as a piece of bog; so it was, but what has it cost me to make it a garden? it has cost me many pounds to bring it into an alluvial soil, to grow those things. It will now grow them in a wonderful state, but you must lay out a vast sum of money before you can make it alluvial soil.

2462. Do you consider you must lay out more money, if it had not any moory soil upon it?—Yes, for some of the plants it would, because it would be necessary to correct that moory soil in a certain degree.

2463. There is also plants that it is favourable to?—Yes; to most of the vegetable tribe, particularly the asparagus tribe.

2464. And the celeries?—Yes.

2465. Do you think that these plants, which have been referred to, can be brought into general cultivation in Ireland?—Certainly not.

2466. Are there not large tracts of alluvial land upon the banks of rivers in Ireland, which are rich enough to grow these plants?—I believe most of them are not of that alluvial quality, like the savannahs of America, which grow the hemp. They have few tracts of that description in Ireland; there are some in Clare and Roscommon, but in the other parts of Ireland those lands are of a poor description.

2467. You are aware there are several thousand acres on the banks of the river Shannon and which are flooded at high tide, making the soil of a rich description; do you think those lands would be suited to the cultivation of those plants?—Yes, they would grow any thing which do not require a very hot sun to ripen, but I doubt whether they are fit for the purpose at present.

2468. Do you think the growth of hemp or flax would be rather injurious to Ireland with reference to agriculture?—Certainly, it hurts the land very materially.

2469. You have stated that it cost you 13*l.* an acre to reclaim the first red bog you tried your hand on; in the present state of your knowledge, what would it cost you to reclaim the average of the red bog in Ireland?—About 10*l.* There are several circumstances to be considered. It depends in a great measure whether the people are of an orderly description, for it requires a great deal of management in those works. I am satisfied if I were not a practical man, those works would have been stopped long ago from the feuds among the people. Some Englishmen were brought over, and I dare say some misfortune would have happened to them if there had not been persons to take care of them. I promised each of the men working with them 1*l.* apiece if they came safe out of the country, and that induced these men to watch them; and afterwards, when one was with me about six months, I found his arm was broken. One of the men who took care of him came to me

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himself, and said, if his arm had not been broken it would have been worse. I asked him why? He said he took a great deal of care of him, but he attempted to seduce women, which would not be borne in the country. That man would have been murdered if there were not a provident person about him; he would have had his head broken instead of his arm.

2470. You have stated that 13*l.* an acre was the expense of reclaiming the red bog; will you state how you estimate that expense?—Forty shillings an acre is what the drainage cost, and under favourable circumstances it will cost less. In some places men are cheaper, in some they are dearer, and that is the reason you will get work cheaper under some managers; but I think generally 40*s.* would be a fair allowance to calculate for the bogs.

2471. What do you pay for wages?—Ten-pence a day.

2472. Is that the average amount of wages in the country?—No, in the West of Ireland 6*d.* and 5*d.* a day is the price. Through Galway, I can get a hundred men at 5*d.* a day, and some of them come seven miles for that. At present, in my own works at Westmeath, I have boys come three miles for 3*d.* a day, and are thankful for it.

2473. You pay 10*d.* a day in Westmeath?—Yes.

2474. Could you get labourers for less than 10*d.* a day in Westmeath?—No.

2475. Will you get them at that price all the year round?—Yes, it is reduced when winter comes on, for of course there is not a demand for the cultivation, and until that is raised, there will be no benefit to the public.

Veneris, 12° die Junii, 1835.

ANDREW H. LYNCH, ESQUIRE,

IN THE CHAIR.

Colonel *John Fox Burgoyne*, called in; and further Examined.

Col. *J. F. Burgoyne.*
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2476. ARE you aware that by the 18th section of the Act, all persons receiving advances under the Act, except grand juries, are bound to enter into a security to His Majesty, whereby they are made Crown debtors?—Yes, I am aware of it, and I know it has been an impediment to obtaining better security than we have been forced to take in consequence of that; those persons of independence have an objection to bind themselves to the Crown, the consequences of which are very serious; and therefore I think that provision is rather prejudicial than otherwise.

2477. Would you recommend that the security so to be taken should be given to the commissioners instead of the Crown?—I would, in the usual form, as between party and party.

2478. Would not persons be more willing to become sureties for others if that suggestion was adopted?—I have no doubt they would.

2479. And would not thereby the security to Government be eventually better?—I think it would.

2480. Will you have the goodness to look at the 48th section of the Act?—I am aware of that provision in the 48th section.

2481. Has not such provision also operated as a great impediment to the loans of money and to the employment of private capital in public works in Ireland?—It has occasionally, and I think is likely to do so again; inasmuch as that parties who are willing to risk a certain given sum will not enter into a business by which they may be liable to any amount whatever. This provision, I think, has been turned from what was more necessary formerly, before so many researches were made into the nature of an operation for which a loan was obtained, and it became then very expedient, to prevent deception, to bind the parties to complete the work; but at present, under our Board, such a strict investigation takes place by engineers of our own appointment, that I think the same risk is not run, and therefore it is unnecessary to frighten individuals from pledging themselves towards works by such a provision as this.

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Mr. *John Featherstone*, called in; and further Examined.

2482. YOU have expended large sums of money upon your property in the way of reclaiming land?—Yes.

2483. You may be a tenant in fee-simple, perhaps?—I am.

2484. But you could not expect that a tenant for life would lend out money in that way?—Certainly not; my eldest brother is anxious to lend out money to a great extent, and has a similar rail-road to mine, but says he would not go to the extent I have, because it would hurt his youngest children, as he was only tenant for life, although he allowed he could make more money than I did, for the situation of the bogs was much more favourable for the operation.

2485. Would it not be a very prudent power to give a tenant for life, with proper precautions to lay out money in the reclaiming land, the money so to be laid out by him under this protection to be a charge upon the inheritance?—I am satisfied it would be received as a great boon by the landlords of Ireland of the improving class.

2486. Are you aware there is such a provision respecting the planting of trees by an Act of Parliament in Ireland?—I am.

2487. Has not that operated beneficially?—It has.

2488. Have you known any instance where it operated otherwise?—No.

2489. Can you state to the Committee any protection that, in your opinion, ought to be taken, so as to protect the remainder-man and the inheritance against any injudicious outlay or fraudulent attempt to charge the inheritance?—No, I never brought it to my mind; I never thought of the question; and it requires of me some time to consider the subject; I should wish rather not to give an answer on the subject.

2490. But, in your opinion, the tenant for life not having such a power at present, is a great obstacle in the way of improvement?—I have heard several complaints of it, and a wish that it was removed.

2491. You stated that you have known several instances, with respect to the planting as allowed by the Act, where the power given to the tenant at the expiration of his lease, of charging the head landlord, is beneficial; will you mention any instance?—In my own case, I have property for three lives for thirty-one years, and my tenant has improved to a great extent in the way of planting; he would never have done so if he had not had the power of charging me for those trees. I have known on bishop's lands these improvements would not have gone on if they had not had the power by this Act of saving themselves as to the planting.

2492. Would you extend that power of charging the land to any lessee that would be willing to improve?—I certainly would.

2493. Would you extend it to a lessee having a lease of the duration of 21 years or under?—No.

2494. What would be your limit as to the duration?—Three lives for 31 years is what we call a fair lease.

2495. And you would give such a power to a lessee?—I certainly would.

2496. For what kind of improvement; I suppose you mean permanent improvements, such as substantial buildings?—Certainly.

2497. When you say three lives for 31 years, I suppose you mean concurrently?—Yes.

2498. The power, if I rightly remember the Planting Act, is, that if the landlord refuses to take them at the value, the tenant has a right to cut them down?—Giving him a year for the removal.

2499. How would you arrange the other improvements, if the landlord differed in opinion with the tenant as to their value?—Have an arbitrator called in on both sides.

2500. By arbitration?—Yes; you see a great number of the landlords are going on that principle of allowing the tenants for improvements, without any Act; the Marquess of Lansdowne has a large property in my neighbourhood, and he has a working agent, and he surveys before the rent-day comes all the good improvements, the good quickset ditches, and what he calls permanent improvements; he gives in a list of their work as so much rent, which passes by the agent; his estate is improved manifestly in consequence.

2501. Are you not aware that, generally speaking it is the custom of landlords to allow for certain permanent improvements, such as gravel?—It is occasionally done, but I do not consider it to be the general custom.

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2502. These powers that you would confer on tenants for life and lessees, would you not confine it to the reclamation of land, or would you extend it also to buildings?—I should view with a jealous eye that business of building, because there might be a useless outlay in many cases in the way of building; it would be a dangerous thing; I should object much to it in the case of buildings.

2503. A suggestion has been made to the Committee that the Crown, for giving grants for improving these lands, should be recompensed by receiving in return part of the land; what do you think of such a plan?—I should object to that, the landlords in Ireland would consider it a forced boon upon them, giving up their property as a remuneration for opening these waste lands; I think myself the Crown would be amply repaid in another way for opening these waste lands.

2504. In what way?—It would put down, in the first place, illicit distillation fully, and the Revenue police, which is a great cost to the Crown and the country at present, would go of course along with the illicit distillation; that would pay the Crown.

2505. What is the difference of the value of oats raised in the interior of the mountains, and outside?—It was considerably higher in the mountainous country than the lowland; when I go from Westmeath into Galway, it is strange to say, I find oats at a higher price in Galway than in Westmeath.

2506. How do you account for it?—Illicit distillation.

2507. You mean in the district of Galway, where there were no roads?—Generally all over the province of Connaught.

2508. You are aware there is a very good reason for that, in the circumstance of its being necessary to have the best description of corn for making meal?—Oh! they do not trouble themselves much with meal in Connaught; it all goes to illicit distillation; instead of having the meal to come upon when the potatoe crop is bad, it is all gone in illicit distillation; you seldom see the peasants use meal there.

2509. You accounted for the distress in a certain way; do you account for it in this way, that there are no roads to bring in the food and the grain?—Certainly.

2510. Pray did you ever read the evidence of Mr. O'Farrell before the Agricultural Committee, I think the year before last; Mr. O'Farrell, the Member for the county of Kildare, relating to illicit distillation in the county of Kildare?—I do not know that I did; I could not answer you positively.

2511. Are you aware of this, that the illicit distillation is more general in the county of Kildare, round Mr. O'Farrell's house in every direction, 21 miles from Dublin, than any place in Ireland?—I went to the Custom-house myself, for the purpose of stopping the illicit distillation about Mr. O'Farrell's house; but it is in consequence of the position of his house, being surrounded by the bog of Allen on one side, and the swampy country of Trenara on the other; in those fastnesses it is difficult to put down illicit distillation, though the gentleman may be very anxious for it.

William Bald, Esquire, called in; and Examined.

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2512. HAVE you been employed in any public works in Ireland?—I was employed as one of the engineers to report on the practicability and drainage of the bog lands in Ireland. I have laid out some hundreds of miles of roads in Ireland; I am the directing engineer, now employed in deepening and improving the harbour of Drogheda; also in conducting the works of the Antrim coast road, which runs along the north-eastern shore of Ireland; the great road now making between Kenmare and Bantry, in the South of Ireland. I have examined the country, and reported on the making of a rail-road from Limerick to Carrick-on-Suir; also on one from the Cave-hill to Belfast; and I was also directing engineer to the Commissioners of the counties of Londonderry and Antrim, for building a bridge over the Lower Bann, which has been finished, and various other works in Ireland.

2513. You were employed, you say, respecting the reclaiming of the bog lands of Ireland?—I was.

2514. Did you satisfy your mind upon that occasion, that in general the bogs of Ireland were capable of being reclaimed, and to what extent?—After having surveyed and levelled more than 300,000 acres, I found them all level-free, unlike a part of the fens in England, or the bog soil which covers a portion of South and North Holland, being under the level of the ocean.

2515. What do you mean by level-free?—Any portion of ground standing above the level of the sea, that the waters will flow freely from it by drainage.

2516. What part of the bogs of Ireland have you surveyed?—Three districts

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west of the Shannon, viz. the district which occupies the summit ridge of the country lying between Killala Bay, Galway Bay and West Port Bay; the next district was in the south and eastern division of Mayo, embracing the basins of the rivers Moy and Robe, the plains of Mayo, and a considerable extent of territory, stretching into the county of Sligo. This district extended to the edges of Lough Garra, which is one of the feeders of the Shannon; the other district occupied the south-western division of Mayo, lying between the waters of Lough Mask and the Western Ocean, and between the Killery on the south and Clew Bay on the north; a hilly but improveable district of country, and the remainder of the flat and elevated bogs in Mayo.

2517. Were all the lands to which you have now referred bog lands, or were they lands covered with water, and part of it capable of being drained, so as to protect them in winter?—The instructions of the Commissioners for the drainage of the marsh lands of Ireland, specified that if a bog could not be drained without reducing the water level of a river or a lake, in that case it was the duty of the engineer to report upon the lowering of the waters in the river or lake, so as to afford an ample drainage for the bog lands adjacent.

2518. What would be the probable expense per acre for such drainage?—This depends upon the extent and nature of the strata to be cut through or lowered. Detailed estimates are to be found in the Reports on the bogs, and I remember making an estimate of a tunnel through limestone for draining Saleen lake, near Castlebar, containing, when under flood, more than 200 acres, besides giving vent and a better fall to more than 1,500 acres of bog lying near it. I also proposed to lower the bed of the Minola river, which would not only drain the bogs, but an immense quantity of bottom land, and would give a power of irrigating to a great extent. The expense per acre for draining bog must vary according to its nature, whether soft or firm; some of the bogs in that country extend to a depth of 42 feet in some instances; in others not more than from 3 to 10 feet in depth; they are generally surrounded with limestone, limestone gravel, also with other gravel, and the high grounds contain mica slate and sandstone; granite is found in the south-western district of a most superior kind, and also on the borders of Lough Cullin. Under the bogs in many places, beds of marl are to be found; and in the creeks and bays on the coast shell and coral sand is to be found in abundance; affording immense facilities for bringing into rapid cultivation those waste lands.

2519. Is there not sea weed?—And sea weed also in great abundance. With regard to the price per acre for the drainage of the lands upon a general and extended scale, I should say about 1 *l.* per English acre to drain.

2520. After you have drained the land, what would be your next process in the way of reclaiming?—It would depend much on the nature of the bog that was to be improved. Torrefaction, burning the surface, laying after that either limestone gravel or lime in a caustic state, shell or coral sand, or any calcareous substance upon it, which would reduce the bog matter to a fertile vegetable mould, and which would be then capable of producing luxuriant and fine crops of corn and potatoes, &c. &c.

2521. What would be the expense of that second operation?—About 4 *l.* 10 *s.*

2522. In those Reports you made, according to the instructions of Government, did you not estimate every one of those things, both drainage and the price that was necessary to bring the land into a state fit for cultivation?—Yes.

2523. Have you any reason to alter your opinion from subsequent knowledge as to the correctness of your former estimates?—None.

2524. In what year was that?—In the years 1810, 1811 and 1812; after having surveyed all these morasses, I examined the drainage of Holland, and the operations of the Dutch engineers, both in the northern and southern territory of that country, and I have been still more convinced of the practicability of draining the bogs, and also of improving the southern and western districts of Ireland.

2525. Has the diminished value of agricultural produce since that period and the equal value of labour, made any change in your opinion?—I am still of opinion that even low as agricultural produce is, that not only the draining and improving of the bogs of Ireland will be found profitable, but will increase the revenue of the state, and enable England to obtain several articles which she at present purchases in a foreign market. It has been stated that during the last War England paid to foreign countries, ten millions annually for agricultural produce, which might have been procured from Ireland if the bog lands had been under cultivation.

2526. Is it not a very different thing to reclaim an acre of land when the value

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of a quarter of wheat is 120*s*., from reclaiming the same land when you can only have from 40*s*. to 50*s*. for it?—It must, if the price of labour in both cases be the same.

2527. Is it not a very different speculation, reclaiming land when wheat is 120*s*. per quarter, from what it is when wheat is between 40*s*. and 50*s*.?—It must, if the price of labour be the same.

2528. How can you consider that the calculations that you made in the years 1810, 1811 and 1812 are to be considered good for the years 1834 and 1835?—Calculations based on the value of produce when high, must, no doubt, undergo a modification when low; yet notwithstanding the draining and reclaiming of the bogs in Ireland will be found profitable; there is no species of improvement remunerates better than draining.

2529. Pray, after the expenditure of 1*l*. per acre on draining, and 4*l*. 10*s*. on reclaiming, what rent do you suppose that land would have produced in the year 1814 on an average; you have taken the average of the draining, what would it produce in 1814?—I should think from 15*s*. to 20*s*. an acre.

2530. What would it produce now?—I am not exactly able to answer that question; because I am not now acquainted with the markets of that part of the West of Ireland.

2531. Do you know the value of land in Ireland generally now in comparison with the years 1810, 1811, 1812 or 1814; would you take off a third?—Yes; I should think about a third.

2532. Is there any other expense attendant on reclaiming land besides that you have now mentioned, the drainage and the reclaiming by putting calcareous matter on it?—Besides opening the districts of bogs thoroughly by roads, and fencing, I do not remember any thing, except to preserve a perfect drainage, and to bring it into a proper system of cropping, and into good condition; I do not know any thing else to be done.

2533. If these lands on an average would produce 15*s*. per acre in 1814, what do you suppose they would produce now?—Ten shillings an acre. With regard to the improvement of the bogs of Ireland, I am of opinion that moss or bog might be applied to a variety of useful purposes; it could be employed to the working of steam engines in vessels navigating the rivers and lakes in the West of Ireland, also in machinery, in steam engines employed in all kinds of factories. Carbonized peat or bog would also make excellent malleable iron. The iron of Sweden owes its high value and good qualities to its being manufactured by pine charcoal. The sulphur in the coal deteriorates the iron manufactured in Britain. The malleable iron manufactured by carbonized peat would be unequalled for making chains for bridges of suspension, cables for ships, &c. &c.

2534. I wish to ask whether any particular process is necessary to be gone through with the peat and turf, in order to fit it for the purpose you have mentioned?—Nothing more than drying it well; but for general use the pressing of dried bog fuel into a small volume would be valuable to Ireland. This is a very important subject, and I am very glad you have put the question, because various attempts have been made to consolidate peat, to make it occupy a less space, and to procure a greater quantity of heat; experiments have been made in Scotland; they have been published; in which ton for ton of compressed peat, as compared with coal, has been found to give as much heat. They have, however, failed generally in the compression of peat, because the attempts have been made to compress it when in a state of wetness, and that, though impossible to be attained, is quite easy to be done when in a dry state; it then might be pressed to one-fourth its volume, and in that state it might be applied to very many useful purposes. On the Shannon, there is a vessel, called the "Lord Dunally," having a single engine on board of 18 horse power, which is fed by peat fuel. This steam-boat is propelled along the waters of the Shannon at an expense of 4*d*. per mile; she is an iron boat, 70 feet long, 15 feet beam, and consumes 30 boxes of turf in going 30 miles.

2535. Compressed turf?—No, the ordinary turf.

2536. Do you mean to say she goes against the stream, or against the tide, consuming only 4*d*. per mile?—Yes, she sails daily 30 miles, and the expense for turf is 10*s*.

2537. Against the tide and against the wind?—Yes, up and down the Shannon against wind and current, from Portumna Bridge to Shannon Harbour. There is

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as much bog in Ireland, as would supply the present inhabitants of 7,000,000 and a half with fuel for 2,032 years ($1{,}760^2 \times 7 = 21{,}683{,}200$, $\frac{21{,}683{,}200}{5} =$ $4{,}336{,}640 \times 7{,}031 = 30{,}490{,}915{,}840$ tons, if compressed for 4,064 years), allowing a consumption to each person of two tons per annum; the consumption of the cities of Great Britain being about one ton of coal to each inhabitant per year, and two tons of uncompressed peat is equal to a ton of coal; but if compressed, ton for ton, equal.

2538. Can you state to the Committee whether any and what steps have been taken in consequence of the reports that have been made by the commissioners for reclaiming the waste land of Ireland?—The bogs in Ireland since the years 1810, 1811 and 1812, that I have been acquainted with, have not undergone any improvement, except some small operations round the edges of some of them, where the country people have reclaimed some small plots or patches, after the upper surface had been considerably cut away for fuel.

2539. Has any great outlay of money been expended?—I have not heard of any great organized plan having been acted upon in conformity with the suggestions of the commissioners' engineers, except a small district in the South of Ireland, under the direction of Richard Griffith, esq. Those bog reports, however, of the marsh lands of Ireland, have excited very great attention, not only in Ireland, but in France. They have given much valuable information regarding the levels of the country, and several applications were made to me in Paris to procure copies of the reports of the commissioners for the drainage of the waste lands in Ireland; and I suggested to the Royal Society of Dublin to have those plans and those reports all published, thereby diffusing a greater mass of useful knowledge, regarding the drainage of the waste lands of Ireland and the levels, than perhaps any other country, with the exception of Holland, would be in the posssession of. These reports excited attention in France, because there is in that country more than two millions of acres of marsh; therefore an anxiety prevailed to learn every thing regarding the drainage proposed in Ireland. Monsieur le Baron de Monbret, Member of the Institute, was most anxious to purchase a copy; and Monsieur Masclet, formerly Consul-general for France, in Scotland; also Mr. Warden, who was formerly Consul for America in the time of Jefferson being President of the States.

2540. You are aware the reports, as they stand, would be enormously expensive, on account of the maps?—I am not aware that so great a country as Britain, possessing such enormous means, having 4,500,000 acres lying uncultivated and unimproved, a receptacle at present for miasmatic infection, producing typhus fever through the land; I say no expense should deter the Government of such a country as England from having those maps and reports, not only printed and neatly engraved, but the survey of the bog lands of Ireland ought to be entirely finished; some districts remaining still unsurveyed and levelled or reported on.

2541. Perhaps you will mention where the maps and plans now are?—They are all in the Dublin Society.

2542. You have said you have been lately in France?—Yes, I was there several years.

2543. Do you remember the manner of drainage in that country; can you state to the Committee your observations respecting the manner of drainage in France?—I am not aware there is any thing peculiar in the mode of draining in France different from that to be found in England, except the laws passed by the government of Buonaparte, on the 16th September 1807, which are partly to be found in the second volume of the Encyclopedia of the French engineers. It states, that fever having frequently manifested itself along the borders of the marshes in France, the draining of them became necessary. I think the marsh of Contentin, the marsh of D'Arles, and of the Etang de Rochfort, were drained during the time that Buonaparte wielded the sceptre of that country, and he intended to have had the whole marshes in France drained; also during his government the Pontin Marshes, in Italy, were examined and levelled, and reports on the Delta of the Po were made, I think, by Baron Prony, chief engineer, and director of the school of roads and bridges in Paris. The proceedings were as follows. Commissioners were appointed, who ordered a general survey of the marshes, at the expense of the government. The boundaries of each proprietor were distinctly marked upon the face of the maps or plans, describing the number of acres, and annexed to the map a valuation by the commissioners; this was prior to any drainage. But when that was effected, which was done under government,

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and solely at its expense, the lands were then offered to each respective proprietor, at the expense that they had cost for drainage. If the proprietors chose to redeem the property, they paid the money; others who did not choose to do so, their part was sold by public auction. If the money received for the value of the drained marsh land exceeded the price of drainage, so as to make the marsh fit for agricultural purposes, the balance was handed over to the proprietor, and the other part remained to the government, as an indemnity for the expense of surveying, valuing and draining.

2544. Would you suggest the adoption of a similar measure in Ireland?—I am not so thoroughly acquainted with British law, and with all the intricacies of property, to offer an opinion off-hand on so important a measure, and bearing on so many interests.

2545. Would you give a power to a tenant for life to charge the inheritance with the necessary outlay for the reclaiming of land, and with what precautions?—I beg to say, that in making roads through the bog lands and vales of Ireland, I have had an opportunity of knowing that the farmers occupying portions of land would drain and improve, if proper encouragements were given to them; I mean to say, leases of 21 years, and leases of 31 years; but, I think, that in large districts of country, where the bogs are very deep and of great extent, that nothing short of a great national measure should be put in operation to effect a drainage.

2546. Have you formed any definite ideas of what that measure ought to be?—As there are 4,500,000 acres of waste land in Ireland, bog land, I am of opinion——

2547. Which are capable of being reclaimed?—Yes; I have found, by barometrical measurement, corn and potatoes growing luxuriantly at heights of seven and eight hundred feet above the sea. I am of opinion that it ought to be a measure undertaken by the Government of the country, or at least under its authority, because those waste lands are injurious to the health of the inhabitants; besides those lands would produce an immense quantity of articles which are now imported from foreign countries. Perhaps the want of capital in that country might also be added as a reason why the Government should give some security to companies, either in Ireland or in Britain, connected with some definite plan for their improvement. There are near a million of men in Ireland that could, during many months of the year, be employed in a most useful and profitable manner, and men's hands are capital, and when men are idle, it is a loss to the State, for they must be fed; it is therefore lamentable to see not only those 4,500,000 acres lying in a state of nature, but to see so many men unemployed; the quays of Dublin are crowded with them, passing to England searching for employment. There is another circumstance I beg leave to mention, connected with the bog lands of Ireland, that in draining them, more fuel would be procured. A moss or bog is like a coal field; it is even better, for when a coal field has been exhausted, it never can be reproduced; but a bog can, for all the bogs of Ireland have been formed from the obstruction given to the free passage of water; also climate and the irregularity of surface may be added, for we find the greatest quantity of bog land occupying the northern countries of Europe, bordering the Baltic Sea to the south and north, within certain latitudes, because they are not to be found in southern Europe, where the climate is dry. If the bogs of Ireland were drained, as I have before mentioned, fuel could be had in abundance, and the capital (Dublin) might perhaps be supplied with 600,000 tons of peat fuel, instead of importing from three to four hundred thousand tons of coals from England. I should like to see a great part of Dublin supplied with fuel from the interior bogs.

2548. Why is it that Dublin market is not at present supplied with turf from the interior?—The bog of Allen approaches to within about 20 miles of the capital, or 22 miles of the capital, the eastern edge of it.

2549. There is the Grand Canal?—The Grand Canal could not at present spare as much water in a dry summer season, from its existing trade, as would carry a sufficient supply of turf to Dublin. The Royal Canal, which is fed from Lake Owel, has also been known in one season, within the memory of man, to be short of water. It is therefore my opinion, that it might be difficult to procure a sufficient supply of turf fuel for even half the consumption of the city and environs of Dublin. Turf at present in Dublin sells for about 15*s.* per ton; coal may be taken at about 18*s.* per ton.

2550. Has the difficulty you spoke of, with respect to the deficiency of water, ever been felt in the carriage of craft into Dublin?—A deficiency of water, I believe, has been felt in summer on part of the Grand Canal. At present there is imported

ported into Dublin by the boats about 50,000 tons of turf, every part of which is sold at the rate of about, as I before mentioned, 15*s.* per ton, which is equivalent to coal at 30*s.* per ton. The poor people of the city of Dublin prefer turf fuel to coal fuel for the purpose of cooking, &c., and it would be a blessing to many classes of people in that city to have turf fuel given them at half the present price. In the bog of Allen, turf fuel could be cut for 1*s.* a ton; it could be pressed with a pressing wheel at 6*d.* per ton; it could be carried along the main trunk rail-road, which is to traverse Ireland into the city at the rate of—I am going to allow so high as 1¼*d.* per ton per mile, which for 40 miles will be 4*s.* 2*d.*; 1*s.* for cutting it; 6*d.* for pressing it; then the poor of Dublin would pay, including other charges, about 6*s.* per ton, and at present they pay 15*s.*; it is worth examination. A loaded boat at present carries about 40 tons of turf; those boats cannot go along the Royal Canal and Grand Canal to the fields of bog, and get a cargo, and return back to Dublin in less than from six to eight days.

2551. I asked you whether any practical difficulty with respect to the supply of water had taken place?—I do not think the Grand Canal has a sufficient supply of water to carry such a quantity of turf as six hundred thousand tons annually into Dublin along a distance of 40 miles and passing 19 locks.

2552. Would you not in a very short time exhaust all the bogs of Ireland?—I have already made a calculation that there is as much bog in Ireland as would supply the present population for twenty centuries, and if compressed for forty.

2553. Could not a sufficient supply of water be obtained for the Grand Canal for all purposes?—I am sure that at present there is no such supply of water as would send into Dublin, 40 miles distance, 2,000 tons of turf daily by the Grand Canal.

2554. Are you aware that there is a perpetual combination among the turf growers of Dublin along the line of the Canal?—I am not aware of that.

2555. Therefore you are not apprised that even human lives have been sacrificed because more boats were put upon the Canal, because turf sold a little cheaper by them?—I am not aware of it.

2556. You are not apprised of the fact that the combinators have become successful, and they do not allow the boats to discharge except by a given order, which keeps up the price?—No, I am not; but this argument proves the necessity of some other mode of conveyance perhaps than that by water; it is a much easier matter to stop a boat on a canal than to stop a train of waggons going at a velocity of 15 miles an hour.

2557. But the moment a train of waggons has gone by, is there any difficulty of breaking down the rail-road?—There is a possibility also of breaking the banks of the canal and spreading destruction to a greater extent.

2558. And there is the same possibility of breaking the rail-road?—I am not of opinion that for this argument of yours, an improvement that will extend civilization and confer so much benefit on the population of the city of Dublin, and particularly the poor, should be deterred from being proceeded with.

2559. Are you of opinion these facts have been stated to deter people from introducing civilization?—No, I am not; I only regret extremely to hear that such has been the case.

2560. You spoke of the deficiency in the supply of water; are you aware there is a river going to waste almost constantly, in a very considerable stream, by the banks of the Grand Canal in Dublin?—I have always heard them complain of the want of water for the Grand Canal in Summer.

2561. Are you apprised that they might take the River Liffey?—There is a possibility that the Grand Canal might be very much improved, and some levels perhaps run into one, and a greater supply of water given.

2562. I perceive you are not apprised that it is not only physically possible, but there is an Act of Parliament empowering them to take the River Liffey; are you aware of that fact?—No.

2563. Then I perceive that when you speculate on the canal being, I may say, physically incapable of giving to Dublin the proper supply of turf, you said that in the absence of the knowledge of a number of facts belonging to that particular subject; is that not so?—It takes a loaded boat about six minutes to pass a lock, and no calculation has yet proved to me that the Grand Canal is able to send in daily 2,000 tons of turf a distance of 40 miles, because it has not a supply of water for such an extensive traffic.

2564. The question I put to you is, when you thus speculate of the impossibility of supplying turf to Dublin by reason of the deficiency in the Canal itself, I want

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to get this admission from you, that you are unacquainted with several facts and particulars that would just answer those objections?—It is a matter of calculation, and I say that the Canal is not able to perform it. The Grand Canal is not able to send into Dublin daily 2,000 tons of turf 40 miles, and passing 19 locks. The annual revenue alone of the carriage of 600,000 tons of turf fuel into Dublin at the low rate of 1¼ *d.* per ton per mile, would be 125,000*l.*, more than double the revenue of the Grand Canal.

2565. Is that the least answer to me of your want of knowledge both of the law and facts touching this canal; you make a calculation about locks?—I have calculated as to time, and inquired about the supply of water also on the Royal Canal.

2566. I am speaking of the Grand Canal?—There are 19 locks on the Grand Canal, through which loaded turf-boats pass, carrying about 40 tons. They take about six minutes to pass a lock, and from six to eight days to perform a voyage. I am therefore of opinion that 2,000 tons of turf, the daily consumption that the city of Dublin would require, could not be carried in by the Grand Canal.

2567. Do not you perceive that your answer is totally independent of the supply of water, and presupposes a sufficient supply of water; for you cannot make a calculation of so many boats passing through a lock, if there is no water?—I have made the calculation both by the time and also by the water; and I am decidedly of opinion that the Grand Canal could not send in daily 2,000 tons of turf fuel, nor any thing like it, for a distance of nearly 40 miles, and passing 19 locks, for there would be required for this traffic several hundred boats. The carriage alone of 600,000 tons of turf fuel into Dublin would give full employment to both the Grand and Royal Canals, and afterwards plenty to the railway.

2568. You talked, in your evidence a few minutes ago, of a main trunk of rail-road; now where would you propose to have that main trunk of rail-road passing through Ireland, from one point to another?—I should propose, as a national work, that the rail-road should go through the centre of the kingdom, convenient to the great bog-fields, in the lowest and most level ground, directly across the country, to the Shannon, with branch lines to Galway and to Sligo, the main trunk extending through Mayo to the harbours of Blacksod and Broadhaven, or Clew Bay. In Clew Bay are to be found numerous safe harbours, with Clare Island as a breakwater at its entrance, and on which a harbour might be formed at its eastern extremity, capable of giving ample security to any ship or ships. I have read a manuscript report of Murdoch Mackenzie's, on the formation of a harbour at Clare Island, in which he speaks most favourably; this was at the time he was making the charts of the shores of Ireland, and I presume that report can be procured, if required, I think it would be important, for this reason, that this main trunk would embrace a very extensive population, divide Ireland in two, supply the capital with turf fuel to a considerable extent, and it would also be nearly in the line of direction, going on an *arc of the sphere* from Liverpool to Dublin, across Ireland, and on to St. John's in Newfoundland.

2569. Do you not conceive it might be done much more cheaply than in the proposed way towards Valentia?—I am of opinion that no part of Ireland, in crossing it, offers greater facilities to the making of a rail-road than that from Dublin to the shores of Galway and Mayo, because the country is level, and contains an abundance of material, necessary to the construction of such a work.

2570. What kind of harbours are those of Blacksod and Broadhaven?—Blacksod harbour is very large and roomy, and works to any extent might be constructed within it to hold ships; it also stands much seaward into the Atlantic.

2571. What sort of harbour is Broadhaven?—Broadhaven is not so large as Blacksod, but it is an excellent harbour. These harbours might be united together, as they are only separated by a narrow isthmus of about 600 feet broad, by constructing two magnificent floating basins, connected together by a canal. In this country is to be found an abundance of the finest granite in the world, extremely suitable to engineering works of all kinds.

2572. Do you not consider that those harbours are particularly well situated for steam navigation with the shores of North America?—I do; for they lie near the straight line drawn on an *arc of the sphere* from Liverpool and Dublin to St. John's in America.

2573. Do you think it is nearer to the straight line than the line to Valentia?—I am of opinion it is nearer to the line drawn on an arc of the sphere going in the direction from Dublin to St. John's, than going by Valentia to St. John's; I am also

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of opinion that the country offers greater facilities to the construction of a rail-road, and is more level. The ground is more hilly and undulating, taking a line from Kingstown Harbour to Valentia, than from Dublin to Blacksod and Broadhaven, Clew Bay, or Galway.

2574. What are the different lengths; is there any difference in the distances?—In a straight line from Dublin to Valentia it is 162 geographic miles, and from Dublin to the harbours of Blacksod and Broadhaven it is 140 geographic miles. This has been measured from Arrowsmith's Map of Ireland, and also the following distances:—

Dublin to Sligo	in a straight line,	94	geographic miles.
Dublin to Westport	,,	118	,,
Dublin to Galway	,,	97	,,

and from the Black Rock outside of Blacksod Harbour to St. John's in Newfoundland, taken on an *arc of the sphere*, is about 1,580 geographic miles.

2575. Have you formed any calculation of the expense?—No, I have not; but I should imagine from the low plateau which stretches from Dublin Bay to the waters of the Atlantic, across Ireland in that direction, either to Galway or Mayo, it could not be attended with any great expense. I will venture to say, on account of the facilities, that it will be done for 10,000*l.* a mile.

2576. Are the coasts of Galway and county of Clare such as to give Blacksod Bay a decided preference over the harbours in Connemara and Kilrush?—I presume, by an inspection of the chart, that the position of the harbours of Blacksod and Broadhaven are very peculiar, and are capable of being united and improved to a great extent; perhaps more seaward than those that might be suitable for such a purpose, either in Galway or Clare; there can be no doubt that the shortest and most level line is from Dublin to Galway Bay, or to the shores of Mayo at Clew Bay.

2577. Would vessels be at all times able to leave the harbour of Blacksod?—O yes! steam vessels would; it is a large, roomy, spacious entrance, of great area within, and three, four, five and seven fathoms deep, and where ship basins to any extent might be constructed.

2578. You are acquainted with Kilrush?—Yes, I have been at Kilrush.

2579. And you prefer Blacksod Bay to Kilrush, the mouth of the Shannon?—I have been looking to the shortest direction to be combined with the most seaward harbour, and what would give the greatest possible advantage to the country, by the construction of a main trunk railway across Ireland; and I am of opinion a line taken from Dublin to the shores of either Galway or Mayo would be in the shortest and in the most level direction; and the harbours of Blacksod and Broadhaven will be found to be the most seaward in that line.

2580. Do you suppose the turf is now cut in the bog of Allen for 1*s.* a ton?—Turf is cut for 1*s.* a ton at Mr. Browne's, near Limerick, also in parts of Galway and in Mayo.

2581. Are you aware that Blacksod is 150 miles north of Bristol?—It is about 185 miles north of Bristol.

2582. Are you aware it is 184 miles north of London?—It is about 180 miles north of London; but it is only about 15 miles north of the straight line drawn on an *arc of the sphere* from Liverpool to St. John's in Newfoundland.

2583. Are you aware the wind generally blows from the south-west in the western parts?—I am aware of it.

2584. Are you aware to get to Blacksod any vessel from America, for example, would have to coast 150 miles, any vessel coming from Philadelphia?—I should imagine a proper steam vessel, under the direction of a skilful commander, could make with a west or a south-westerly wind Blacksod or Achil Head just as direct and easily as any other port or headland, situated on the west or south coast of Ireland.

2585. I am speaking now of sailing vessels; a sailing vessel from Philadephia, for example, would she not have to go along 150 miles of Irish coast to get to Blacksod?—I do not conceive why a skilful commander should not at once make Achil Head as well as Valentia, or any other part on the West of Ireland, and without incurring the risk of a lee shore with such a wind.

2586. Must not that depend on the state of the wind; for instance, in a winter's rough gale would he not be losing lee way all the time?—If the vessel was kept too much southwards, and made Valentia close, with the wind in upon the coast, I would then say the ship was on a lee shore; but in running from Philadelphia

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for Blacksod in Mayo, or for the Channels to the North or South of Ireland, the captain should run for them without creating a lee shore, by keeping his ship upon her true course, and with a wind from the west or south-west, he very easily could do.

2587. But will not her course be affected by wind and tide?—There is no question of it.

2588. Then her course being affected by the gulf stream, for example, as far as it is felt, and the wind blowing from the west, is it not clear that there is a lee shore in Ireland before you get to Achil Head, of 150 miles?—If Valentia be first made, then there would be a lee shore; but why go so far south with the ship? why not run direct for Achil Head without creating a lee shore by going so much southwards?

2589. The wind blowing from the west or south-west, is there not a lee shore of 150 miles?—That depends upon the position and distance of the ship from the coast, and which may be known by the reckoning and observation. If a ship be running from North America, and is carried out of her direction either by wind or tide, a skilful and experienced navigator will always know his position and avoid a lee shore.

2590. Is there not a lee shore in Ireland of 150 miles and upwards for every western wind and south-western wind, before you get to Achil Head, coming from the south?—Yes, if Valentia be first made, but not if the vessel makes direct for Achil Head, which she can do with such a wind.

2591. Supposing you are going from the West Indies to Blacksod?—I am not aware in that case of any difficulty that a ship has in making Blacksod Bay, as easily and as safely as any other harbour on the west coast of Ireland, the Atlantic being wide and open and the wind free.

2592. Do you mean to say, with the wind at west or south-west, you are not aware of a lee shore from Cape Clear to Blacksod Bay; a vessel being off Cape Clear, and the wind being west or south-west, and the course of the vessel being Blacksod Bay; do you mean to say she has not a lee shore of upwards of 150 miles?—It depends upon the ship being close upon the land; it depends upon the position and distance of the ship from the land.

2593. I would ask you, suppose a ship is coming from the river St. Lawrence to Broadhaven, will she consider any part of the coast of Irelanda lee shore, with the wind from the south-west?—That would depend upon the part of the coast she would make, and the port she was bound for.

2594. She can go direct to it, as easily as she could to Valentia?—She could make Achil Head and Blacksod as easily and directly as she could Cape Clear, Valentia, or the northern or southern Channels of Ireland; besides Achil Head is the most remarkable headland on the west coast of Ireland, and forms the land on the south entrance into Blacksod Bay. The saddle of Achil Head is elevated above the sea 2,254 feet, and can be seen in clear weather seaward, on the waters of the Atlantic, at a distance of more than 58 miles. This gigantic headland is therefore, perhaps, one of the most unerring guides to the mariner, when he makes land crossing the Atlantic from America to the west coast of Ireland, that can perhaps be any where found on the coast, being remarkable both for its contour, height and seaward position, such as no mariner, even in the night time during clear starlight, could easily mistake. A light-house, erected on the Black Rock, which lies seaward to the entrance to Blacksod, would be required, if the harbours of Blacksod and Broadhaven are destined to become the connecting point of Western Europe with the New World.

Lunæ, 15° *die Junii*, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Mr. *Richard Griffith*, called in; and Examined.

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2595. YOU are a civil engineer?—I am.

2596. You have been employed by Government in Ireland on several Public Works, and also in a public capacity, have you not?—I have; I am at present employed as director of the boundary department of the Ordnance Survey of Ireland; I am likewise Commissioner for the general valuation of Ireland, and I have the direction of the new Cork and Kerry roads, which are now being made at the joint expense of the Government and of those counties.

2597. You

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2597. You have been employed for some years in the construction of roads and bridges in Ireland, have you not?—Since the year 1822 I have been employed in the construction of roads; and I have made 240 miles of road, partly at the Government expense, and partly at the joint expense of the Government and of the counties through which they pass.

2598. In what part of the country?—In the counties of Cork, Limerick, Kerry and Tipperary.

2599. Can you state to the Committee the situation of those counties, before making the roads, and state what they are now in their present situation?—In three Reports prepared by me, and which have been laid before Parliament, I have fully described the state of the mountain, as it was when I commenced the roads; it was for the most part uncultivated and in a state of nature; and the inhabitants presented an appearance of misery and destitution almost unparalleled; at present the inhabitants are comfortably housed, comfortably clothed, and the country presents a scene of activity and industry which is truly pleasing.

2600. Can you state shortly to the Committee the consequences attendant on making the roads?—The consequence has been that the same people who in the year 1821 were lawless banditti, have become industrious and successful agriculturists.

2601. The lands have also been cultivated, which were before in a state of waste?—Yes, to a very great extent; many thousand of acres are now in a state of cultivation, which were formerly comparatively waste; and the value has been increased from about 1*s.* an acre to 20*s.* and in some instances to 30*s.* an acre.

2602. If means were placed at your disposal, do you think you could apply a large sum of money profitably in the construction of roads and reclamation of bogs in Ireland?—Certainly; and not only in the mountains, but also in the lowlands.

2603. Can you state to the Committee, in particular, what parts of the country require most that assistance?—I think the western counties of Ireland require it more than the eastern; I would particularize the counties of Cork, Kerry, Clare, Galway, Mayo and Donegal; but all the mountain districts of Ireland require additional roads, as a prelude to draining and agricultural improvement.

2604. At whose expense would you propose those roads to be made?—I think that all leading lines of road should be made at the expense of Government; but the smaller ones partly at the expense of the proprietors, partly at the expense of the county, and partly at the expense of the Government.

2605. In three divisions?—Yes; I am of opinion in all uncultivated and waste tracts, if the landed proprietors possessing two-thirds of the value of the land, agree to subscribe jointly one-third of the expense of the road for opening their estates; if the Board of Works approve of the line, and consider it to be of sufficient importance, they should be authorized to grant a sum equal to that subscribed, viz. one-third; and it should be imperative on the county to grant the remainder by presentment.

2606. On the county or barony?—I think the money should be levied off the barony and the county in the usual proportions. I conceive that the occupants of lands without roads have hitherto paid county assessment, and therefore that the county is greatly indebted to them; and consequently they have a right to demand at least one third of the expenditure from the county; and I am of opinion that the Government would be amply remunerated for their contribution by the increased sale of exciseable articles.

2607. Then these observations of yours do not apply to waste lands, or probably you would extend them to waste lands?—I have spoken of the lands inaccessible for want of roads, and these are waste lands to a certain degree, though a portion may be cultivated.

2608. By waste lands, you mean lands that give no profitable return at present, such as bogs?—My observation applies to both.

2609. How do you propose the roads through the great bog districts to be made?—Exactly on the same principle I have described; that is to say, the main leading lines of road at the public expense, and the branch or agricultural roads, at the proprietor's, the county and the Government. I would here mention a road, which, if completed, would perhaps be one of the most useful in Ireland, which was commenced about 50 years ago, at the expense of Government, but never persisted in; I mean the road known by the name of Mosses' Road, which was intended to open a new line from Dublin to Limerick, and which, if completed, would shorten the distance between those points about 10 statute miles. This road would run in a direct

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line from Dublin, and pass through the villages of Selbridge, Clane and Prosperous, where the Bog of Allen commences, and extends about 15 miles, I should think almost without meeting any hard land, though it passes very near to several gravel islands in the bog. This road would tend more than any other to improve those great bogs; they are at present quite inaccessible. If this leading line of road were completed branch roads might be made across other portions of the bog, to connect it with other roads in the country; these branch roads should be made partly at the expense of the proprietors, in the manner I have already described. These extensive bogs belong principally to the Duke of Leinster, the Marquess of Downshire, Sir Gerald Aylmer, and a great number of other large landed proprietors. Formerly the boundaries through these bogs were not known, but by the agreement of the whole of the gentlemen possessing estates therein, the boundaries were determinately marked out under my direction, for the purposes of the Ordnance Survey of Ireland.

2610. You have stated that at present mountain lands contribute to the county assessment; does not your observation enable you to say that the present assessments are most inequitably applotted on the different description of lands?—Certainly the present applotment is very unequal; but the new valuation now in progress under my direction will equalize the whole.

2611. Pray how soon do you expect that the valuation will be completed, so as to prevent this inequality?—I think the valuation of the whole of Ireland will be completed in about 10 years; at present there are five counties in progress. The valuation of the county of Londonderry is completed, and also considerable portions of the counties of Antrim, Tyrone, Down, Fermanagh and Donegal.

2612. Are the grand juries assessed according to this valuation?—The new valuation of the county of Londonderry is now in operation, and likewise that of the barony of Strabane, in the county of Tyrone; and the barony of lower Glenarm, in the county of Antrim, is also completed, and will be laid before the grand jury at the approaching summer assizes.

2613. Is there any way in which the benefits arising from a more equal valuation can be advanced before the period of the termination of the Ordnance Survey?—I think, by judicious management, an approximation might be made through the Tithe Composition valuation; but it would be only an approximation, because these valuations have not been made according to any regular principle, and some are valued on a high scale, some on a low scale, in order to equalize them. It would be necessary to make a valuation of some portions of each parish, so as to form a scale to enable the applotters to determine what additions or reductions should be made from the different parishes, so as to approximate them to the same scale. This system has been proposed by Mr. Musgrave for the county of Waterford.

2614. Suppose you were to impose a new tax on the community, such as poor rates, if you were to use the present valuation according to the grand jury system, would it not press very unequally?—Certainly. In some instances, the present county assessment amounts to the rent, in others, a trifle only is paid.

2615. You talked of a subscription of one-third from the landowners for making roads, and a third to be given by Government, and a third levied upon the counties; now, in order to raise the subscription of one-third, if only a certain portion of the landlords actually did subscribe, would you give a compulsory power respecting the others, who were unwilling or who neglected to subscribe?—Most decidedly I would give a compulsory power, and if they did not pay it willingly, I would go so far as to sell a portion of the land benefited to pay the portion which should have been subscribed.

2616. Then would you in every case in which the Board of Works thought it expedient and beneficial that a road should be made, and that Government were willing to subscribe one-third, would you give a compulsory power as to the one-third by the grand juries, and as to the other third respecting the landed proprietors?—I would give no power over the landed proprietors, unless two-thirds agreed to it and petitioned for it.

2617. Would you extend this power to the building of quays and harbours on the sea coast, and upon the banks and lines of the rivers and lakes?—Not on the sea coast, unless under peculiar circumstances, because I think small piers in such situations are rarely valuable, and are often carried away; but the power might be applied advantageously to inland rivers and lakes.

2618. In the same proportion?—Certainly.

2619. And subject to the same terms?—Yes.

2620. Do

2620. Do not you think it desirable to construct small piers on the sea coast?—I think it would be desirable to construct them where they would withstand the waves; but we have had melancholy examples of small piers erected at the Government expense which have been almost all carried away, which shows the impropriety of building *very small piers*.

2621. Has that not been owing, in a great measure, to the circumstance that there was no provision made for the maintenance of those piers?—I think that may have been partly the case; but the money expended rarely exceeded 500*l.* or 600*l.*, which was quite inadequate for the erection of piers capable of withstanding the Atlantic waves.

2622. If the sum was doubled, what would you say then?—That would depend upon the circumstances; if you are to make a pier in deep water, you can rarely do any thing of value under 2,000*l.*

2623. Do you not think it would be desirable, in cases of those piers, the county should contribute one-half the expense, and the Board of Works the other, when the pier was much wanted?—If a great public advantage was to be derived, I think the county should pay half; but I would not tax the county at large, if it were only for a local purpose.

2624. Placing the assessment on the barony or the district, would you see any objection?—No, provided the rate-payers of the barony or district applied for it, and I think in such cases the landed proprietor should also contribute.

2625. Would you in this case of making roads through those remote and uncultivated districts provide for compensation to be given for the land to be taken by the road?—Certainly not, in all cases of roads through those districts the land is so materially benefited that no compensation should be given; and in conducting the roads made in the southern districts in Ireland, amounting in length to 240 miles, I never paid any compensation; but in some instances the proprietors paid their own tenants when valuable land was taken.

2626. Would not a great benefit arise also to the country by the extension of canals?—Undoubtedly.

2627. Has it occurred to you where such extension or such construction would be most beneficial; in what part of Ireland?—I have not given the subject as much consideration as roads, but I think it would be beneficial to make a number of branch canals from the main trunks already completed. Those already made pass for their greatest extent through bog lands, which produce no traffic, except turf; and in consequence the Grand Canal derives little advantage from the transport of corn till it reaches Tullamore, 40 miles distant from Dublin on one branch, and Athy on the other, where it joins the River Barrow, which flows through a fertile valley.

2628. Has not one of the consequences of the canals being made, been the cultivation of the adjoining bog lands?—Wonderfully little, I think.

2629. What is your reason for so thinking?—Because the banks of the canal are not public roads, and there are inconveniences from the back drains.

2630. But have not canals been sometimes beneficial as a means of draining the adjoining lands?—They have, certainly, but not very frequently; I think in many cases the canals have been embanked where they crossed bogs.

2631. Would you mention respecting the Royal Canal what you consider the cause that the tolls of that canal are so very much inferior to the tolls on the Grand Canal?—I believe that the country through which it passes, or in which it at present terminates, is less rich, and produces less corn, than the district of the River Barrow, or of the King's County beyond Tullamore.

2632. Do you think it would be a desirable object to extend that canal across the Shannon into that rich district of country?—Certainly.

2633. Is it not also partly owing to the circumstance of the Shannon on both sides of the Royal Canal being very imperfectly navigable, whereas on both sides of the Grand Canal it is good navigation?—Certainly; but the banks of the upper Shannon do not produce much corn; the Shannon may be described rather as a chain of lakes than a river; and its flat banks, which in many places are very extensive, are overflowed in winter and frequently in autumn; and no means have yet been taken to embank it; so that hitherto little advantage has been derived from the very valuable low lands which border the Shannon and its tributaries.

2634. Is there not a steam trade that goes up the Grand Canal, while there is none on the Royal Canal?—There is a steam trade on the Lower Shannon, on Lough Derg, which is of great value to the Grand Canal; but as yet there is none on the Upper Shannon connected with the Royal Canal.

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2635. Have you had under your consideration the extension of the Grand Canal to Roscrea?—I have, and I think it would be a very desirable extension; a great part of the country is rich, and produces fine corn; but every branch canal from the main trunk, which opens a fertile country, must be highly advantageous.

2636. The main line is comparatively useless without feeders?—Exactly so.

2637. And you would apply that remark also to the main line of the Shannon?—Certainly.

2638. Would you improve the tributary rivers?—I would; almost all the tributaries consist of dead rivers, which could be easily made navigable.

2639. Are you acquainted with the River Suck?—I am; I made a survey and section of it under the Commissioners for the Improvement of Bogs.

2640. Might it not be made navigable to a great extent?—The River Suck might be made navigable at a comparatively moderate expense as far as Ballyforan.

2641. As between the two lines of railway, with a view to post-office communication and passage communication with America; namely, the one between Valentia and Dublin, and the one between Blacksod Harbour and Dublin; which do you consider the most eligible?—I have no hesitation in preferring the south-western one, that to Valentia.

2642. What do you think of the medium course, to take Galway?—I do not think the harbour of Galway is so well situated for the American trade as Valentia; it is farther north, and there is more difficulty in getting out. The harbour of Valentia has two entrances, one to the north, and another to the south, which is a great advantage.

2643. Would not all the difficulty be removed of getting out by having a steam-vessel in the harbour?—I think not, with a south-western wind, which prevails for at least nine months in the year, it would be difficult to clear the land without first sailing considerably to the northward out of the course.

2644. Do you consider, with reference to the general interests of the empire, that the establishment of a railway between Valentia and either Waterford or Dublin would be an object of national importance?—I do.

2645. Do you consider it would be justifiable for the Government to become shareholders with a portion of the national funds in such an undertaking?—I think it is a national work, to which the Government should contribute largely.

2646. Taking their share of the profit and loss?—Certainly.

2647. Taking it as a national object, is it not more an American national object than a British national object?—America certainly would be equally benefited, no doubt; and very likely the American citizens might contribute.

2648. They would contribute as passengers?—And they might also become shareholders in it as a speculation.

2649. You have directed your attention to the reclamation of waste lands in Ireland?—I have.

2650. You have yourself tried experiments in the way of reclaiming and improving land?—I have, but rather on a small scale.

2651. What has been the success attendant on those experiments?—The experiments have been tried on the Crown estate at Pubble O'Keefe, in the county of Cork, and hitherto the success attendant upon them has been very considerable, fully as great as I had anticipated; but the extent actually reclaimed does not exceed 20 acres.

2652. But the whole property is in progress of improvement, is it not?—No, only a small portion at the present time; my duty was to make the new roads, and the bog improvements were undertaken with a view to render the place suitable for the erection of a small village, which has since been built, and the greater part of the bog has been reclaimed, and is now under crop. I should think the progress of the land improvements has been retarded from a want of labourers; my chief object was the roads, and hitherto nearly all the people were employed on them.

2653. Are the roads completed now?—They are nearly completed, and at this moment we have about 120 people employed on the Crown lands.

2654. Of how many acres do they consist?—I think there are about 5,000 English acres.

2655. And have you constructed roads sufficiently through the interior of those 5,000 acres?—No, only one main line of road, which leads from Tralee to Cork.

2656. And you have reclaimed 20 acres of bog?—Yes, of deep bog, through which the road passes.

2657. Do you find want of hands at all seasons of the year?—Not at all seasons;

sons; a great number of labourers can be had in the months of January, February and part of March, also from the middle of June to the end of July; during the remainder of the year the people are employed in agriculture; for instance, last year, in the month of July, I had 1,300 people employed, and on the 20th of August not more than 50.

2658. Therefore, with respect to that part of Ireland, it is not an object for the outlay of public money, the occupation of the unemployed hands?—I have made roads, and employed the people during the last 12 years, in the counties of Cork, Limerick, Kerry and Tipperary, and I found that, generally speaking, I could not procure any number of labourers for more on an average than four months in the year.

2659. Then, with respect to those districts, there is no want of work except for merely four months in the year?—Certainly; and I think the observation applies to all Ireland, towns only excepted.

2660. The reclamation of these districts of land is entirely dependent on the construction of roads through them?—Entirely.

2661. Wherever roads have been constructed, the reclamation has taken place to a great extent?—Certainly.

2662. Is there not a sort of reclaimable mountain for the most part throughout the whole of the southern district?—The chief part of the surface is composed of bog, varying in depth from 9 inches to 3 feet, below which there is a clayey or sandy subsoil.

2663. What would you say was the amount per acre, on the average, required to bring it from its state of nature to a cultivated state?—I think about 4*l.* per statute acre.

2664. And what are the respective values of the different parts before and after that expenditure?—That depends so much on the elevation and aspect of the ground, that it is difficult to answer the question, but it would vary from 5*s.* to 10*s.* an acre when 4*l.* has been expended on it.

2665. That is, the rent becomes variable from 5*s.* to 10*s.*?—Yes.

2666. English or Irish acres?—English.

2667. Additional or absolute?—In absolute value.

2668. Do you find that the different aspects of mountain land, or land to be reclaimed, makes a very considerable difference in the expense of their reclamation?—Not in the expense, but in the value.

2669. You said you considered the expense necessary to bring that land into a state fit for cultivation to be about 4*l.* an acre; will you mention how you lay out that sum?—The draining of that kind of land would generally amount to 1*l.* an acre, and in some cases to 1*l.* 4*s.* per acre.

2670. In covered drains?—Certainly; the smaller drains should be covered; the remainder of the expense consists in trenching the surface, turning up the subsoil and mixing it with the bog; a portion is also burned to produce ashes for manure.

2671. You trench it altogether?—Yes.

2672. There is no occasion to put manure on it?—No, the ashes are sufficient for the first crop; it takes 4*l.* to dig, trench and prepare it for a crop; I am speaking of moory mountains.

2673. Would you think it desirable, with respect to Pubble O'Keefe, that the tenements at present held by the farmers should hereafter be sold to such of them as were able by their frugality to lay up the purchase money, either to be sold in fee or subject to a rent for ever?—I think it would be a very great excitement to their industry, and therefore a valuable arrangement.

2674. What description of farms would you consider most advantageous for the country to be so sold?—The extent of the farms must be proportioned to the quality of the ground; if the ground be valuable, farms of about 40 acres would answer, but if they be mountainous, I would make each from 100 to 300 acres in extent, according to quality.

2675. Such a measure would have the effect of creating a yeomanry in a district in which such characters scarcely exist at present?—None such exist at present.

2676. Generally speaking, there is scarcely such a thing as a proprietor in fee, among the poor or middling classes, in that part of Ireland?—I am not aware of any instance of a man having an estate of 40 acres, or any thing so small, who lives solely by the cultivation of his estate.

2677. Are you aware of such a class of men in the county of Wexford?—I am not;

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not; but I have heard of the industry of the people of the baronies of Forth and Bargin in that county.

2678. That is a well cultivated district, is it not?—It is; and the inhabitants are a very peculiar people and very industrious.

2679. Do you attribute that entirely to the circumstance of holding land in fee, and not under others?—I cannot say whether they hold in fee or not, but certainly the people are very industrious.

2680. Notwithstanding the roads made through this district, adjoining Pubble O'Keefe, is there not a vast district of country that is scarcely penetrable by roads at all?—At present there are a sufficient number of main lines of road in that district; that is, the district between the rivers Blackwater and Shannon; but branch roads in addition would be very advantageous. I conceive the public have gone far enough in that country; the landed proprietors should do something, and I think, as I mentioned at the commencement of my examination, that the landed proprietors should give one-third, the Government one-third, and the grand jury one-third.

2681. Are there not great tracts of mountain country between Newcastle and Newmarket, in the line of Pubble O'Keefe, in which there are scarcely any cross roads?—As yet there are no cross roads connecting the new main lines of road made by me through that district.

2682. How many cottages have been built at Pubble O'Keefe?—Very few as yet; we are now building four as models.

2683. And what quantity of land do you mean to allot to each of those cottages?—That department is not under my direction; but I think from 60 to 160 acres.

2684. Do you not consider that the bog and mountain land of Ireland is generally to be profitably reclaimed?—The reclamation of mountain land is very profitable and easily effected; but the reclamation of deep bog land is attended with a much greater expense, and requires both care and judgment.

2685. But both are?—Certainly.

2686. And both would give a successful return?—I think so, when judiciously treated.

2687. I believe you stated that some land has been reclaimed in the neighbourhood of Pubble O'Keefe?—Yes.

2688. Profitably reclaimed?—Profitably reclaimed as far as we have gone, but the extent is only 20 acres; and I do not conceive that to be sufficient to found any general conclusions on.

2689. Do you not conceive it would be an advantageous thing that the experiment should be made, both in bog and mountain land within a short distance of Dublin, in a central part of Ireland, which would be more accessible to persons in Ireland generally?—I conceive that sufficient experiments are now being made by individuals; and consequently the intervention of Government is unnecessary. Mr. Featherstone is now making a very valuable improvement, which I have seen, on as unpromising a bog as any in Ireland; and Mr. William Murphy at Lullymore Island, in the very heart of the Bog of Allen, near Mosses Road, which I have mentioned, is now draining, and I understand has drained upwards of 200 acres of deep bog in the most perfect manner, and is now about to commence claying it.

2690. Do you believe those gentlemen are keeping accurate accounts of the expenditure and value of the land previous to the commencement of those operations?—I have reason to believe that both are keeping accurate accounts of the expenditure.

2691. And such accounts as will be satisfactory to the public to look into, founding their calculations on the advantage of reclaiming bogs and mountains?—Certainly.

2692. And do you think that those two gentlemen doing so is equally, or more, advantageous, than if it was accompanied by engineers, under the direction of the Board of Works?—I think a Government experiment would be expensive on account of the agency. Private individuals give their own time; they have their own stewards, that are employed occasionally at other business, and it is only at certain seasons of the year that bog improvements can be carried on beneficially.

2693. You do not think more skill and capital would be used by Government than can be used by those individuals you have mentioned?—The system they proceed on is the same I have adopted at Pubble O'Keefe; but my observation with respect to agency does not apply to Pubble O'Keefe, inasmuch as I act for nothing, and my road overseer makes no charge; therefore the results on the Crown Lands, as far as they go, may be viewed in the same light as those conducted by private

private individuals; but if the Government were to undertake an experiment on a large scale in the Bog of Allen, the cost of agency would be considerable.

2694. Do you not think it would be more advantageous that all the expense of agency, of the higher or the inferior kind, should be charged against the reclamation, so that persons going to reclaim would be able to judge of the whole expense?—I think it would, but no man would employ an engineer to improve 20 acres of bog.

2695. When your proposal was that an experiment should be made on 300 or 400 acres of bog, and of 300 or 400 acres of mountain, in the vicinity of Dublin, or in the centre of Ireland, do you not think that two such experiments being made under the inspection of engineers employed by Government, and with the capital that the Government can afford, would be advantageous for the rest of Ireland, to show how it might be done in the best manner?—I think it would have certainly the effect of showing that bog could be improved; but I doubt much whether the public would place more dependence on it than on successful experiments carried on by private individuals for their own benefit.

2696. Is not the fact of the reclamation of bogs and mountains so established, that no experiment is necessary to persuade any scientific man of the possibility of carrying it into effect?—No doubt the practicability is well known, but few good results have been obtained; and I think the experiment, on a large scale, is now being tried for the first time in Ireland, by Mr. Featherstone and Sir William Murphy. There have been occasionally a few acres reclaimed by gentlemen close to their demesnes, but nothing for a profitable farming speculation has ever before been attempted.

2697. Are you aware the Dutch Company formerly offered to reclaim the Bog of Allen?—I am.

2698. Were you not employed on a survey of the bog in the year 1809?—Yes, to survey the greater part of the Bog of Allen, and also the bog of the south of Roscommon and part of those of Galway; also the mountain bogs of Wicklow, and part of Mayo.

2699. Were you not satisfied of the perfect possibility of reclaiming those bogs?—I was perfectly satisfied of it; but I was the more sanguine then than I am at present, in respect to the expense of reclaiming bogs perfectly.

2700. That refers to the flat bogs, and not the mountains?—Yes.

2701. What part of the expense has altered your opinion with respect to its being greater?—I now concur that it is necessary to lay on a greater quantity of clay or gravel than formerly.

2702. Can you say what quantity of clay is necessary, or what quantity you allowed in your Report?—Formerly I conceived that a coat of clay or gravel two inches in thickness was sufficient; I am now of opinion that to reclaim a wet spongy bog, four inches are necessary.

2703. What do you consider to be the cost of claying per acre?—About 6*l.* 13*s.* an English acre; but that will depend upon circumstances.

2704. You have mentioned the expense of reclaiming mountains; will you mention what you consider to be the expense of reclaiming deep bogs per acre?—I conceive the drainage of an English acre in the most perfect way to be about 1*l.* 4*s.* per acre, which is about 40*s.* per Irish acre, that includes the under drains; then the levelling and digging comes to about 1*l.* 10*s.*, and afterwards the claying, which amounts to about 6*l.* 13*s.* per statute acre. The clay is laid on four inches thick, by means of an iron rail-road. Thus the total expense is about 9*l.* 7*s.* per statute acre.

2705. What do you consider that acre would be worth after the operation; it was, I take for granted, not worth any thing before?—It was of no agricultural value, and so wet that it was dangerous to walk on. The land is situated in a remote part of the country; if it were in a cultivated part of the country, it would be worth 12*s.* 6*d.* per statute acre.

2706. Can you conjecture when these operations of Mr. Featherstone and Mr. William Murphy are likely to be brought to a conclusion?—Mr. Featherstone completes the reclamation of a portion every year; but Mr. William Murphy's, I think, will not be in a very forward state for three years to come.

2707. Do you consider four inches deep of clay to be necessary to the reclamation of a deep bog?—I do.

2708. Because it is a much greater proportion than is usually put on?—I know it is; but unless you put on that quantity, there will not be a sufficient strength of soil to grow crops; with equal portions of clay and bog earth you have eight inches

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of a good soil, but after a succession of crops the worked soil increases to 12 inches in depth, and then you have two-thirds of bog and one-third of clay; and unless you have at least that proportion of clay, the soil will be too weak, particularly when it is a flow bog that yields white ashes; but whenever you have a bog that yields red ashes, one-fourth of clay is sufficient.

2709. Do you not think a bog that yields red ashes would give you a greater crop without manure than flow bog?—Certainly.

2710. Do you not conceive that four inches of clay is more than the land can advantageously bear, and that in a great measure its effect will be lost by the sinking of that clay by its own weight to the substratum?—When the drainage is perfect, it does not sink. The process I would recommend is, to drain the bog two years before you clay it, and dig it and turn it up, and expose the surface to the winter frosts; by these means the bog becomes a vegetable soil, and is fit to receive the clay.

2711. Do you consider that the tendency of reclaimed land to revert to its original state, and to require breaking up and renewing of clay, is owing to the present system of not throwing sufficient clay on?—I attribute it chiefly to imperfect drainage; I think a bog reclaimed in the manner I recommend, and cultivated for four years, and laid down afterwards with grass, makes good pasture land, which will not revert to bog.

2712. Do you not consider that a bog when properly reclaimed is capable of yielding any crop whatever?—It will not yield white crops as well as stronger lands; it has a tendency to grow long straw, and does not yield so much meal; it will grow oats and rye better than any other white crops; but well reclaimed bog produces better green crops than any other kind of land.

2713. Cabbages, carrots and mangel wurzel, and all sorts of green crops?—Yes, every kind of green crop; but those specified require to be well manured.

2714. In your opinion, would money laid out in the better cultivation of lands already cultivated, give a more profitable return than in the reclaiming these waste or bog lands of Ireland?—I think the improvement of the land already in cultivation would be more advantageous and more profitable.

2715. In all cases?—Generally speaking.

2716. Is there any regular system of agriculture in Ireland?—It is improving very rapidly indeed; so rapidly, that I think tenants in some parts of the country paying the same rent now, when corn is half the price it was during the War, are as well off.

2717. Is that owing to the improved system?—Yes, owing to the great increase of the produce of their farms.

2718. In what part of Ireland do you conceive this improvement to have taken place?—In the province of Ulster particularly, but every where, very much in the county of Kildare. Farmers have told me that their farms now yield more than double the produce they did during the War.

2719. To what cause do you attribute this improved system of cultivation?—Partly to the general improvement that is taking place through the Empire, and partly to the necessity of greater industry, to enable the farmer to pay rent, owing to the low price of the produce.

2720. Do you attribute this improvement in any degree to the establishment of agricultural societies, which have been pretty numerous in the South of Ireland?—The effect has taken place independently of them.

2721. Do you not consider the great cause of it was the opening of the English market?—We had that during the War.

2722. You spoke of a period of ten years?—Yes, the great improvement has taken place within that period.

2723. By improvement in agriculture, do you mean by increasing the farms, paying a greater regard to fences, and the introduction of green crops, &c.?—I mean the introduction of green crops, and a better system of tilling the land, and keeping it free from weeds.

2724. You do not mean by increasing the size of the farms?—I am speaking of the same farms occupied by the same individuals, who in some cases pay the same rent now as they did during the War.

2725. Does it often occur that there are persons paying the same rent as during the War?—Very frequently, where they hold the same leases.

2726. Do you speak of farms leased during the War, or farms leased previous to the War?—The farms leased during the War have been reduced considerably, but not

not equal to the difference in the price of corn; and yet the people are quite as able to pay the rents.

2727. But during the War they were gaining a considerable profit?—Sometimes this was not the case; what I mean to say is, that the produce of their farms sells for nearly as much now as during the War, in consequence of the increased quantity.

2728. They are able to pay the same rents now?—Yes, some of them pay the same rents.

2729. Do you perceive a corresponding improvement in their houses and their mode of living?—Their houses and clothing are very much improved; I cannot speak as to their mode of living being much altered, though in the towns wheat flour is much more used than formerly.

2730. Are you not aware there has been a most extraordinary increase in the consumption of wheat and bread in Ireland among the lower orders of late years?—I know there has been a great increase in the quantity of flour used.

2731. You mean used in Ireland?—Yes, used in Ireland, and that since the War too; and since the depreciation of the prices the quantity of wheat flour used in Ireland has quadrupled.

2732. Are you not aware that in almost all the small towns in Ireland wheat and bread are now sold where they were not sold formerly?—I am.

2733. Do the poor people use oats for the purpose of making meal for their own use?—In some parts of Ireland to a great extent, particularly in the province of Ulster.

2734. Can you state to the Committee whether any and what steps have been taken in pursuance of the reports of the commissioners, of whom you were one, to survey the bogs?—I was one of the engineers. There has not been as yet much advantage taken of those reports; I know of only one remarkable instance, which is that of Mr. Murphy, who has carefully followed lines of drainage in the Bog of Allen laid out by me in the year 1809.

2735. He has followed your plans?—Yes, he is following the lines of drain laid down on my map of the bog.

2736. Has a survey been taken of all the bog and waste lands in Ireland?—No, not of the whole, but nearly the whole of the large bogs. The commissioners limited the survey to bogs of 500 acres in extent; but there are a great number of a less size.

2737. The whole of the bogs, amounting to 500 acres in extent, have been surveyed?—There were detached ones, no doubt, which were not surveyed.

2738. Would it not be beneficial if a survey was taken of the lesser bogs?—The Ordnance Survey will give the whole of the bogs in detail.

2739. Does the Ordnance Survey lay down a plan for reclaiming them?—It does not.

2740. Does the Ordnance Survey give you any thing but the surface?—The surface and some of the levels.

2741. Does it give you the substratum?—It does not.

2742. Would it not be beneficial, in your opinion, if these bog reports were published in a cheaper form?—I think it would be very desirable; they are very much sought after, and cannot be purchased.

2743. Are you acquainted with the district of Connemara?—I am.

2744. Are there not there more than 200,000 acres of land, which are capable of being reclaimed, and of yielding probably from 7*s.* to 10*s.* an acre more than they do at present?—Perhaps there might be half that extent; the high mountains could not be reclaimed.

2745. What do you think the average rental would be which that 100,000 acres is capable of producing, if properly reclaimed?—That would depend entirely on the expenditure laid out on it.

2746. Suppose the expenditure you allude to on the bog lands to be 9*l.* 7*s.* the statute acre, what then would it be worth?—The expenditure of 9*l.* 7*s.* per acre relates to flow bogs; mountain lands may be reclaimed at the rate of about 4*l.* per acre, and would then be worth about 10*s.* an acre. Connemara has very great advantages in point of situation, almost every part of that district being within a few miles of the sea, where there is an abundance of sea manure, sea sand, and sea weed; and lime also is abundant, interstratified with the slate rocks of the country.

2747. To what circumstance do you attribute that large district running so long

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in that wild state?—I attribute it in a great measure to the want of communications with the interior; till of late there were no roads through that district.

2748. The roads are not now perfected?—They are not; but considerable progress has been made towards their completion.

2749. Had these roads been fully perfected 10 years ago, do you not conceive that district would have presented at this moment a very different appearance from what it does now?—I conceive it is more favourably situated than any district in Ireland, much more so than the mountainous country opened by means of the road made by me, which has already derived so much advantage from those roads, which have been completed about seven years.

2750. Much greater facilities?—Certainly, it is less elevated; there is limestone every where, which is not the case with other districts.

2751. Is there a fine harbour for the export of the produce?—There are several harbours.

2752. Do you think in a district so circumstanced as that, it would be fair for the Government to say to the proprietor, we will lay out, say 20,000*l.* upon making the roads that are necessary, provided you will give up a certain portion of the land to be afterwards sold to the farmer and peasantry, in the same way I have suggested in the way of Pubble O'Keefe?—I do not think the Government should call on the landlords to give up any portion of their estates; but I think if the landlords saw their own interest they would contribute to the roads, on the plan I have suggested.

2753. When you say, you do not think it would be right for Government to call on the landlord to give up part of his estate, do you not think the Government has a right to call on the owner of an estate in a country to make that use of his capital which would be most beneficial to the inhabitants at large; and if a large portion of the people are starving for want of employment, would you think it a measure of justice for the landlords so to use their land as not to give them that employment?—I admit the case as stated is startling; but still I would not directly interfere with private property.

2754. If the proprietors were willing to accede to it?—There could then be no objection.

2755. Would it not be exceedingly to the advantage of the proprietors to make such an arrangement?—If two-thirds of the proprietors, in point of value, agreed to it, I would compel the remainder.

2756. If you were a proprietor yourself, would you not consent to such a thing?—I would prefer having all my land taxed for it to giving up a portion.

2757. Suppose the tenantry were not in a state to bear the taxation?—The improvement of the land would enable it to bear the tax, otherwise the road would fail in its object.

2758. Do you think it would materially tend to the improvement of lands in Ireland, if tenants for life were allowed to borrow a certain sum of money to be expended in improvements, and charge it on the estates, under a similar control as in Scotland?—Most decidedly; I think it most important, and many obvious improvements cannot be undertaken from a want of such a power.

2759. Can you state to the Committee the precautions with which you would accompany such a power?—I would limit the expenditure to one-tenth of the value of the estate, or it might be limited to two-and-a-half years' rent; I think a person wishing to improve his estate should apply to a Master in Chancery, or some legal authority; that the application should be accompanied by a plan in detail of what was proposed to be effected, together with an estimate of the expense. This plan and estimate should be submitted to the Board of Public Works, or some other Board capable of judging of them, and on their favourable report to the Master in Chancery, the landed proprietor might commence the work. Subsequently on the completion of the work, if it appeared upon examination and valuation that the improvement paid 10 per cent. on the capital expended, I would allow that proprietor to begin *de novo* on a similar improvement.

2760. Are you aware that Mr. Wyse brought in a Bill having precisely that very project in view?—I confess I never heard of it.

2761. On what ground do you prefer two-and-a-half years' rental to four years' rental?—Because I do not wish to involve the estate in the chance of an unsuccessful project.

2762. The inheritance?—Yes; but if the two-and-a-half years' rental was expended beneficially, so as to return to the property about 10 per cent., I would

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then allow a second experiment of the same kind, and so on *ad infinitum;* I would have no check, provided each successive improvement returned 10 per cent.

2763. Do you think any inconvenience might arise from submitting to the Masters in Chancery the check which you have proposed; do you think it would produce litigation or any other inconvenience?—I should think not.

2764. Do you think the check which you propose on the part of the Board of Public Works would be sufficient in the first instance; would it be a sufficient check?—I would limit by Act of Parliament the species of work to be effected; it should consist entirely of agricultural improvements, in the nature of drainage, embankment or cultivation of land hitherto uncultivated, to the total exclusion of all buildings; and I think, under these circumstances, there would not be much danger of failure; even if it did not succeed altogether, it must succeed in part.

2765. Would the interference of the Board of Works, or the engineer to the Board of Works, be attended with expense to the proprietors?—As the object of the Legislature is to encourage improvements in every way, it should be done with as little cost to the proprietor as possible. I think the salary of the engineer should be paid by Government; he should only charge his travelling expenses to the proprietor.

2766. You would require, whenever a proprietor was anxious to make certain improvements on his estate, that he should have the power of calling on the engineer of the Government to make a survey and inspection free of cost to himself?—I think where he can make a *primâ facie* case to the Board of Works, and it is approved by a Master in Chancery or some other legal authority, then the Board of Works should send down an engineer to survey the proposed improvements.

2767. And then he might lodge a deposit which would be equal to the expenses?—Yes, equal to the travelling expenses of the engineer.

2768. You have stated you would not include any buildings in the expense of the improvement of estates; on what ground do you make that observation; do you not think buildings are equally improvements with drainage?—I do; but they are perishable, and I do not wish to saddle the estate with them.

2769. Would you not give a similar power to lessees having an interest for three lives or 31 years?—I would.

2770. Under the same protection?—Yes; but I would limit the payment for the improvements to two-thirds of the increased value of the land at the termination of the lease.

2771. Would you not give power to tenants for life under those circumstances to borrow money from the Board of Works for this purpose?—I would, to the extent already recommended.

2772. Does not difficulty frequently occur in respect of incumbrances upon the estate?—Yes, certainly.

2773. Would you give a priority over all incumbrancers to the experimentor for a profitable outlay of money in the manner you have stated?—With the permission of persons who have lent money, but not otherwise, or with the consent of the majority of incumbrancers, I would.

2774. Are you aware, under the present Act, if only one-fifth of the incumbrancers agree that the security given to the Board will have priority, would you now limit it to one-half?—I was not aware of the enactment; but on consideration I think if the work be of great value to the estate, provided it did not exceed two years' income exclusive of taxes, I would give precedence to the loan from the commissioners; if a greater latitude were permitted, proprietors might find it difficult to raise money on their estates.

2775. Would there be any objection to give a priority to the sum borrowed for the purpose of reclaiming and draining lands over a particular portion of the estate to be reclaimed, leaving the priorities of the other securities over the remainder of the estate?—I think under these circumstances it might safely be allowed, and I think there could be no objection on the part of the persons lending money.

2776. Do you think the Government would be justified in lending public money in what would partake of the nature of a speculation?—Unless a strong case were shown I would refuse the application.

2777. Have you had any opportunity of ascertaining the operation of the poor colonies in Holland?—I have not seen them myself.

2778. You have read about them?—I have.

2779. Do you think it would be advantageous to establish poor colonies in Ireland with a view to the reclaiming of the bog and mountain land, and also to the

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employment of the able-bodied poor?—I do not think bog lands are advantageous situations on which to locate people. In wet seasons the quality of the produce is very inferior, and it creates fever. It has been frequently supposed that fever on boggy lands arises from the climate; I believe it to arise solely from the bad quality of the food.

2780. You are talking of lands in a state of bog which have not been reclaimed?—Certainly; I supposed you proposed to locate them on the principle of the poor colonies in Holland.

2781. Is not the land that has been reclaimed in Holland, on which these establishments have been formed, of the nature of our bog-land?—As far as I have read, those bogs are very shallow and not very wet, the sub-soil sand; with us the bogs are deep, the sub-soil marl or gravel, and it is a much more expensive operation to reclaim them on account of their depth.

2782. But your observation does not apply to bogs on the sides of mountains which are reclaimable?—It does not; you might locate people on the sides of mountains advantageously, provided you did not exceed the elevation of 800 feet on the exterior of the mountain, and of 500 feet in the interior; for I consider the climate of 500 feet in the interior is nearly the same as 800 feet on the exterior, owing to the frosts and fogs lying in the interior of the mountain at a moderate elevation above the sea.

[*The following Paper was delivered in by the Witness.*]

OUTLINE of a PLAN for defraying the EXPENSES of employing the DESTITUTE POOR of the Country Parts of *Ireland*, without increasing the present Assessment on Land.

IT would certainly be very desirable that the whole of the money granted for repairing baronial roads should be expended in the employment of the destitute poor, and this can be effected by intrusting the expenditure of the money for each barony to local committees, according to the following system.

It is to be observed, that the poor population of Ireland, even in the comparatively manufacturing districts of the province of Ulster, may be classed under the head of agricultural labourers, and such are very rarely left destitute and without employment, excepting in the months of January, February and part of March in the Spring, and part of June and the whole of July in the Summer season. At those periods there is little employment for agricultural labourers, and I am of opinion, that in those particular months, and in those only, it is necessary to provide employment.

It appears that an ample field for the general occupation of the poor, when most required, will be found in the repairs of the roads at present kept up by grand jury presentments. This species of employment affords a greater variety of labour than other; and individuals of both sexes, from the youngest to the oldest, can have suitable tasks allotted to them; women and even cripples can break stones for roads, and when accustomed to it, can earn good wages, at the usual prices paid for breaking.

The sum to be expended in any particular barony having been ascertained, and the particular works to be executed specified in detail by a county surveyor or baronial overseer, the barony should be divided into several districts, according to its extent and peculiar circumstances; the principal town or village (being as nearly as possible in the centre of each district) to be the meeting place of the district committee, who shall have power to appoint sub-committees to act under its direction.

The Protestant and Roman Catholic clergymen, and (in the province of Ulster) the Presbyterian clergymen, and the churchwardens of the several parishes within the district to be members of the district committee; the other members to consist of the landed proprietors, their agents and principal farmers and shopkeepers of the towns and villages, to be elected by the rate-payers to a certain amount. The district committee to consist of at least seven, and not more than eleven members; three to form a quorum; and the sub-committees to consist of not less than three nor more than seven members; three to form a quorum.

Weekly returns, containing the names of persons employed, showing the nature of the work performed and the sums paid to each individual, to be made out by the overseer of the sub-committee, and having been examined and certified by the sub-committee, to be forwarded to the clerk of the district committee. All repairs and new works should be specified and laid out by the baronial overseer, who is frequently to examine the works during the progress, and to make monthly reports, accompanied by a valuation of the quantity of work done in each district, and stating the manner in which each particular part has been executed; this report, when compared with the expenditure shown by the weekly returns, will afford a complete check on the sub-committees and their overseers.

It appears from a table made by me, and presented to the Tithe Committee of the House of Commons in the year 1832, that the amount annually levied in Ireland for making and repairing roads, is about 360,000*l.*, that the extent of Ireland is 20,400,000 British statute acres, which is, on an average, equal to 4¼*d.* nearly per acre.

Let

Let us suppose that in the four months above mentioned, viz. January, February, half of March, half June and all July, there would be (exclusive of Sundays and wet days) 94 working days. If we divide 360,000*l.*, the amount of the presentments, by 94, we have as a product nearly the sum of 3,830*l.* to be expended per day, which sum, at 8*d.*, the usual wages paid to farming labourers in Ireland, would give nearly 115,000 as the number of pauper individuals who might be daily employed in repairing the roads for four months in the year. The population of Ireland, according to Census of 1831, deducting therefrom the cities of Dublin, Cork, Limerick, Waterford, Kilkenny, Drogheda, Londonderry and town of Belfast, amounts to 7,225,340, which would give about 1,445,000 men capable of labour, calculating one labourer for every five individuals, out of which it appears 115,000, or a little more than one-twelfth part of the whole population of Ireland capable of labour, could be employed during the period above-mentioned, without increasing the present assessment on land; and throughout a great portion of Ireland, I am of opinion that the pauper population does not exceed one twelfth part of its inhabitants.

Richard Griffith

Fitzwilliam Place, Dublin, 14 March 1833.

Mercurii, 17° die Junii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Mr. *Richard Griffith*, called in; and Examined.

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2783. YOU are aware of the Act generally called Mr. O'Ferrall's Act?—I am.

2784. Has that Act been called into operation?—I believe it has not.

2785. Can you account for its not being called into operation?—Perhaps the machinery of it is a little cumbrous, which creates a difficulty in carrying it into effect.

2786. Would you recommend the powers given by that Act to undertakers, or individuals or grand juries, to be given to the Commissioners of the Board of Works, upon the application of a moiety of the landed proprietors interested in the reclamation of bogs?—I think the Board of Works should have the guidance of such works; and in fact I think that all works for which money may be granted or advanced on loan through that board should be conducted under its direction or control.

2787. Are there not vast quantities of land at this moment on sides and banks of rivers that might, by proper drainage and reclamation, be brought into cultivation?—There are; and I conceive that there are no lands in Ireland which can be made available at so cheap a rate as those level tracts which lie on the banks of rivers. They are naturally of a very superior quality, and in many cases they are totally lost from want of the removal of impediments in the course of the river, such as the weirs or dams connected with small corn-mills, which in proportion to their value, do more mischief than any other kind of works in Ireland. Within the last few years, large mills for the purpose of grinding oats as well as wheat, have been erected in many places, and the small corn-mills have thereby become of little importance, and for the most part are in a dilapidated state; consequently their removal would not be felt by the farmer. I know instances where several hundred acres of valuable meadow land are rendered almost a waste in consequence of a corn-mill weir, which mill is not worth 20*l.* a year; eel weirs also present impediments that should be removed. In the county of Kildare, where Mr. More O'Ferrall attempted to introduce his Act, the banks of the Rivers Blackwater and the Boyne present a very large extent of valuable land, which is now flooded, by impediments in the courses of those rivers, and I believe partly from the obstruction occasioned by corn-mill weirs.

2788. How do you propose to get rid of these obstructions, the mills and eel weirs?—I would have them valued by a jury; suppose a number of gentlemen in the country wish to improve their lands by draining, whether it be bog or flat land, on the banks of rivers; if two-thirds of the proprietors, in point of extent and value, agree to improve the lands by means of lowering the course of the bed of a river, I would give the Board of Public Works, if the proposed drainage was approved of by them, the power of summoning a jury to ascertain the injury to be sustained by individuals through the means of the proposed drainage, whether it be for land cut through, or for mills, or eel weirs, if any such required to be removed; and also to ascertain the proportion of the expense supposed to be paid by each proprietor of the land to be improved.

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2789. Does it frequently occur that a landed proprietor is desirous of improving his property, but that he cannot do so without the assistance of his neighbours?—It very frequently occurs, not only in respect of lands similar to those I have just mentioned, but also in bogs, where it frequently happens that a number of proprietors who would wish to improve, cannot do so, unless by passing through the estate of another proprietor, who will not join in the drainage; where that is the case, I would also give the Board of Public Works the power of making drains through the bog of the person who objects, and charging the estate with a portion of the expenditure; provided two-thirds of the proprietors of the bog in point of extent in value agree to improve the bog, and apply to the Commissioners for that purpose.

2790. Do you think it would be advisable if the Board of Public Works were authorized, or Government came forward to give premiums for the improvement of bog lands?—I think it would be most desirable; but I would limit the premiums to the reclamation of red or flow bogs, and the work to be performed should consist of perfect drainage, and subsequent covering with clay, to the depth of at least four inches; and previous to any premium being granted, one crop at least of some kind of valuable agricultural produce should have been obtained off the bog. The reason I recommend the latter clause is, that it is necessary to manure the bog with lime, stable or other manure, to enable it to produce a good crop, and such manuring increases the absolute cost of the reclaimed bog.

2791. To what extent would you give those premiums?—No premium should be given unless an extent of at least fifty acres of red or flow bog shall have been improved; and if the system which is considered the most perfect, and which I have just described, be carried into effect, I would recommend that a premium amounting to 20*s.* per acre be granted.

2792. Out of what funds payable?—Out of a fund to be allocated for the purpose by the public.

2793. Do you think a premium of 20*s.* an acre would be sufficient to encourage people to undertake to any extent the reclamation of bog, considering that it is in evidence before us, that the reclamation of bog such as you have mentioned stands at upwards of 9*l.* per statute acre?—I do think it would have the effect of stimulating persons to undertake such improvement.

2794. Do you not consider that Government opening the river would be of more advantage in the drainage of these bogs, and would be of greater encouragement than the small premiums you have mentioned?—I would do both; and I think, that in all great systems of drainage, and also in the lowering of important rivers, that the Government should contribute a considerable portion of the expense; I would encourage landed proprietors, by offering small premiums to induce them to improve the bogs subsequently to the main drainage being effected; but I would observe, that for the most part the bogs are so situated in respect to level, that they can be drained and improved without reference to the great rivers; but by removing obstacles in the great rivers, the adjoining lowlands, and those which are now liable to be flooded, and which, as I have already expressed, is of more value than any kind of land in the country, would be materially benefited. If it should appear from experiments that hemp or other plants of that kind can be beneficially introduced into Ireland, it will be on low marsh land on the banks of rivers, and not in the bogs, which do not contain sufficient stamina to grow such plants, unless manured and prepared in an expensive manner.

2795. By your former evidence it appeared, that the return to the capital expended in reclaiming bogs did not yield an annual profit of more than about six per cent.; would you consider it, under those circumstances, advisable for the public to advance large sums of money for the purpose of encouraging an outlay which yielded so small and incomparative a return?—When I stated that upwards of 9*l.* per acre had been expended in reclaiming the bog at Pubble O'Keefe, in draining and claying, and that I then valued it at 12*s.* 6*d.* per acre, I gave that sum as an estimate of the value during the progress of reclamation; but subsequently to the claying, the bog was manured with lime at the rate of 72 barrels per English statute acre, which cost 5*l.* per acre. This manuring will, I think, produce four crops, two of potatoes, one of oats, and one of meadow; and I anticipate, on the winding up of the accounts, that a considerable part of the capital expended in draining and claying and liming will have been repaid, and that on the fifth year the pasture land will be worth about 14*s.* per acre, and the nature of the soil will have been changed from spongy moss

to

to a good clayey moor, capable of producing excellent pasture and occasional meadow.

2796. Is there a tendency in bogs when reclaimed to return to their original state?—If they be not perfectly drained, they will deteriorate in a few years.

2797. Is it requisite to keep up a system of drainage at any considerable expense?—No; the system of under draining now adopted is not liable to fill up; the only drains which it will be necessary to keep open, are the external drains round the fields into which the under drains discharge.

2798. Can you inform the Committee the general rate of wages in Ireland for a day-labourer?—I should think it is about a shilling in Ulster, ten-pence in Leinster, eight-pence to ten-pence in Munster, and from sixpence to eight-pence in Connaught, as far as I know.

2799. You do not speak of the average wages throughout the year?—I do.

2800. Do you suppose that a poor man in Munster can be secure of getting wages throughout the year, if he is so disposed, at eight-pence a day?—Not all; I speak of the wages paid to the labourers that are employed.

2801. Are there any unemployed?—In certain times of the year there are. I think in my evidence on a former day, I mentioned that there were four months of the year in which there was not sufficient agricultural employment for all the inhabitants; in those months a portion of the people are usually idle.

2802. Can you suggest to the Committee any means of affording employment to the poor for those four months of the year in which employment is scarce?—I drew out a plan which has been printed in one or two Parliamentary Reports, the object of which was to employ the destitute part of the population of Ireland; those who possess no land, or not more than half an acre, in repairing the baronial roads, and on calculation I found there were sufficient funds at present raised by baronial presentments to employ one-twelfth part of the heads of families of Ireland for four months in the year.

2803. What proportion do you conceive that one-twelfth of the heads of families bears to that description of men you have described, such as have no land or not more than half an acre?—I have taken particular pains to investigate that fact. I inquired from gentlemen in the county of Derry, whether one-twelfth of the heads of families require employment at that period, and it is generally believed they do not. In the barony of Tirkuran in the county of Derry, the baronial presentments amount annually to 1,500 *l.*, and it was supposed that that sum was more than equal to employ all the labouring poor of the description mentioned during four months in the year.

2804. Those roads are at present repaired, and the same persons employed in the repair, repair them continually?—Certainly, the roads are now repaired, but not by the description of persons that I have mentioned.

2805. But by employing that description of persons, or those with whom you would contract, you would extract so much employment from some other class of persons, and therefore in no degree diminish the deficiency of employment that at present exists in Ireland?—I think it would; the persons now employed are farmers and their farm servants, who, instead of using proper material, employ their horses to go to a pit where gravel is easily procured, with which they cover the road instead of broken stone. These farmers and their servants would be more beneficially employed to themselves and to the country in draining or fencing their fields or weeding their crops.

2806. Can those defects of the farmers in repairing the roads that you have mentioned, take place under the present system, the presentments being under the superintendence of the county engineer?—No, not so much, but still the contractors may be of the same class as those who have heretofore repaired the roads, and I wish to take it from that class and put it into the hands of the destitute labourer.

2807. Would not the roads be improved themselves by this system at the same expense that you repair at present?—Certainly; I would employ the poorer class entirely in quarrying, breaking and spreading the broken stone on the roads; of course the stone must be drawn by hired horses from the quarries to the roads, but the main expense of keeping a road in repair is quarrying and breaking stone; and the latter is, generally speaking, so disagreeable to the people, that it is difficult to procure labourers who are not in want to undertake it.

2808. Then the result would be, that the roads would be kept in better order at the same expense?—Certainly.

2809. Do you consider that class of persons, men holding no land, or holding

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half an acre of land, as they are not the class of persons by whom the cess is paid, should have the preference to the exclusion of the cess-payers?—I conceive that the farmers who are cess-payers have abundance of employment on their farms, if they chose to improve their land; but they prefer the easier system of gaining money direct from the county, to the indirect one of gaining it by draining or weeding their fields.

2810. In forming your calculation, you have taken the amount of money applicable every year to the repair of the roads, at 400,000*l.*?—I have not, at present, data to say what the amount is, but I did make an accurate calculation, and ascertained that throughout the whole of Ireland the sum annually levied for the repair of baronial roads would pay for the employment of one-twelfth part of the population for four months in the year, giving each man 8*d.* per day.

2811. By what sort of administration would you conduct this expenditure, so as to supply those persons who may be designated as able-bodied paupers, with the employment you have described throughout those four months?—By local committees.

2812. Local committees acting for the baronies?—The plan I would recommend is, that the county surveyor or a baronial overseer, whom I hope to see added, for the assistance of the county surveyor, should make a valuation in detail of the money that is to be expended on each road throughout the barony; this valuation should be handed over to the local committee, who should employ the people on the different roads; at the end of each month the baronial surveyor should value the work that was done, as a check upon the committee, or as a check upon the overseer of the committee; and if it was found that the work performed was not in proportion to the expenditure, the work should be stopped, and referred either to the county surveyor or to the baronial committee; for it would be necessary when works of this kind are in a great part to be performed by the day, to have some check, particularly upon paupers, who are usually anxious to idle if they can.

2813. Your proposal would entirely do away with the system of contract, which is now the only system under which the public works can be carried on by the Act of 1833?—It would for that part, but not for every kind of presentment; as I would limit it to the repair of roads.

2814. Would you consider it desirable that parishes in Ireland should be entrusted with the power of sending to the baronial works such of their poor as were unable otherwise to find employment, the parishes contributing a certain proportion of the expense of maintaining that poor in aid of the county funds during the time that the poor were so employed?—If a poor-rate system was introduced into the country that might be adopted; but till that is done, we can only carry on the works with the money we have, and which, in a great number of instances, I fully anticipate, will be sufficient to meet the necessities of the case.

2815. Do you consider that it would be possible to find in every barony, or if necessary, a union of baronies in Ireland, committees qualified to undertake the superintendence of the roads within those baronies, assisted by the county engineer, or by the deputy surveyor, if it should be thought expedient to appoint them, as you suggest?—In large baronies no doubt of it; in smaller ones, two or three might be united together; each barony should be sub-divided into districts, in each of which, say in the principal village, a district road committee should meet at least twice a month during four months, or while the poor were employed; and such committee should have the selection of the persons to be employed, and the appointment of a local superintendent of works.

2816. Are you aware that we have not been able to get an attendance of the cess-payers under the Grand Jury Act?—I have heard it; and I have heard some cess-payers who had to travel 30 or 40 miles object to it on that account.

2817. We have failed in getting an attendance four times a year; do you think it likely to get such an attendance as would be requisite for the strict management of the roads as you have stated, which probably might be a monthly attendance?—Once or twice a month; but I confine it to four months in the year.

2818. How would you suggest that these committees should be made, by election of the rate-payers or grand juries of the county?—I think they should be elected by the rate-payers; that arrangement would produce confidence I think.

2819. You think that the rate-payers would not continue in successive years to elect those who would not attend to their business?—I think that a person who was elected by the rate-payers, or any individual who did not attend one half of the

meetings

meetings should, as a matter of course, be discontinued, and another appointed in his place.

2820. You have stated your opinion that every barony in Ireland might employ upon its roads, that part of its population which is at present unemployed during part of the year; do you see any objection to a law compelling every barony so to employ its able-bodied paupers?—No doubt it would be necessary to have a special enactment to effect the object.

2821-2. Supposing there was a barony in which the assessment required for the repair of the roads was not sufficient to give full employment to the whole of the able-bodied persons in want of employment during that part of the year, would not some system of favouritism arise as to those likely to be selected for the employment who were tenants or friends of the principal persons in these baronial committees?—In a case such as that described, of course a selection would be made, and it is only to be hoped that those most in want would be employed.

2823. Is it not advisable, for the sake of the tranquillity of Ireland, that there should not be able-bodied men in danger of perishing at any time?—Certainly it is desirable that men anxious to be employed should not remain idle.

2824. That being the case, and since you are of opinion that very nearly, if not quite, the entire number of the labourers who are at any time unemployed, might be found employment profitable to the district in which they reside, do you see any great objection to going the further length of requiring by law that those who are in want of employment should be employed with a view of preventing the consequences of their continued idleness?—I think it would be desirable, but let us first try the extent to which the funds we have will go, before we make any compulsory enactments.

2825. The impression you wish to convey to the Committee is, that, without involving the landed proprietors of Ireland or the tenantry in any considerable security, that an increase of labour can be afforded to every able-bodied person in want of employment throughout the year?—I limit it to four months in the year; I do not mean to say that there are no persons out of employment except during those four months, but they are what may be considered the pressing months of the year; and I have found from the experience of twelve years, during which I have been employed by the Government in making public roads, that I could not obtain a sufficient number of hands, or any considerable number of hands, except during the four months I have mentioned.

2826. But if, in addition to the repair of the roads, other public works were undertaken in the nature of bog drainage, new roads, embankations of land upon the river, and other works that you have recommended, would there be full and profitable employment for the entire of the able-bodied population of Ireland?—Undoubtedly; and for that reason I would recommend the utmost exertion to be used in draining and improvement of all kinds, not only through the contributions of individuals, but by public aid, in the manner I have already described.

2827. Would you not recommend to the Commissioners of the Board of Public Works, with respect to the roads under their control, to adopt your suggestion as to the employment of those persons to whom you have now referred?—I would certainly wish to suggest to them the propriety of employing the persons who break stones to be of that class.

2828. Do you think it is possible for them to do so at present, as you know they enter into contracts; is it possible for them at a distance to carry such works into effect without entering into contracts?—I think they can do it, inasmuch as I myself, to a certain degree, do every thing by contract; I contract with each individual, or with three or four uniting, by the cubic yard for breaking stones.

2829. Would not the effect of bringing the bogs of Ireland into cultivation, and also those lands upon the sides of rivers, would it not have the effect of raising the price of wages in that country?—If there was a greater demand for labourers than the neighbourhood could supply, of course it would.

2830. Would not the effect of that be, that England would not be inundated, as it is annually, by labourers from Ireland?—Decidedly; in all parts of the country through which I have made roads, I have stopped nearly the whole of the labourers that were going to England, and employed them; at this moment I have about 1,000 men employed, one half of whom would have gone to England to seek work, had I not offered them work.

2831. Is not therefore this country very much interested in affording employment to the poor of Ireland at home?—There can be no doubt of it.

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2832. Would it not also have the effect of tranquillizing the country, and causing the administration of justice to be properly executed and respected?—That question has been put to me in various ways at different times by Government; and in three successive Reports which have been laid before Parliament, I have stated that in the mountain districts of the counties of Kerry, Cork, Limerick and Tipperary, where I have made 240 miles of road, when I commenced the works, they were the receptacles for robbers and outlaws, who could not be arrested, and that the people were idle and extremely poor; but that since the completion of the roads, the whole of the population has become industrious, and corn and agricultural produce of all kinds is now grown where formerly snipes or grouse were the most valued produce.

2833. If dispossessed tenants had a resource in constant employment, would they commit the outrages they are now guilty of?—I am certain they would not.

2834. Are you not aware that a great number of the agrarian outrages in the county of Clare arose from the difficulty which the poorer classes felt in procuring land for the purpose of sowing their potatoes?—I do not know the fact myself, but I have heard it attributed solely to that cause.

2835. In your opinion is Ireland over-populated, as far as its extent and resources?—I think not.

2836. You do not see any necessity for emigration in respect of Ireland?—I think if a judicious system of improving the land was adopted, that there would be sufficient employment for all the people of the country.

2837. But, in the absence of such a system, is not emigration a partial relief, where, locally, the population is so abundant?—Certainly it is a great relief, particularly to towns. I think it is more important to towns than to the agricultural population.

2838. Is not the populations of towns increased by emigration into them of destitute persons from the country who cannot find employment there?—It may to a certain degree, but I think it would be more advisable to assist in the emigration of people from towns than from the country.

2839. Might you not employ persons in the town in improving lands in the country, instead of sending them to America and other countries?—They are frequently distressed tradesmen, who are not much accustomed to country employment; and besides, I think, generally speaking, there are abundance of persons in the country who require employment.

2840. Then, in your opinion, there is ample scope for the employment of all able-bodied men of Ireland at home?—I think there is.

2841. And, in your opinion, they may be employed by a judicious system of public works?—Certainly.

2842. And in the cultivation of land?—Yes, the cultivation of land is the most important.

2843. Are the lands at present in cultivation, properly cultivated?—They are not, very far from it.

2844. If they were, would there not be provided a much more ample scope for the employment of the poor?—Certainly; I conceive that one hundred acres of arable land, if properly cultivated, would give employment to *ten families*, and at present *farmers* rarely employ more than four, and sometimes in the proportion of only three families to that extent of land.

2845. Then combining a proper cultivation of land with the improvement of the bog and other waste lands of Ireland, and also by employing the destitute in the manner in which you have stated, in the repair of the roads, you think the poor of Ireland would be sufficiently employed?—I think they would, but then it is to be observed the people of Ireland are rapidly increasing in numbers, and what may be sufficient at present, may not be at a future period.

2846. In your opinion would not there be an increase of cultivation according to the increase of population?—I think it is probable there might.

2847. Would this increased cultivation and reclamation of the land of Ireland have a tendency to promote population?—I think it would, unless the increased comforts of the people might induce caution, as it does in this country, and have a tendency to retard it.

2848. Would not the increased demand of labour, and thereby the increased price of wages have the effect of inducing the people to look after more comforts than they have?—I should think so; and I am of opinion that the people are now looking after greater comforts than formerly; they are better housed, better fed, and better clad than they were ten years ago.

2849. Then

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2849. Then, in your opinion, the condition of the peasantry of Ireland would be raised by the means you propose?—I think it would.

2850. Do you consider that the state of agriculture in Ireland would be advanced if all manure was by law relieved from toll on turnpike-roads and bridges, as it is about to be in England?—It would be very desirable. I know instances where toll bridges very materially retard the progress of agriculture. I particularly allude to the toll-bridges of Derry and Waterford, and others might be mentioned. The lands on the opposite side of the cities of Derry and Waterford are not nearly as well cultivated, or as rich as they probably would be if manure was free of toll, and the tolls of the bridges would, in the end, be benefited by the great increase in the quantity of agricultural produce that would be brought into the cities to be sold.

2851. You are aware of the con-acre system in Ireland?—I am.

2852. Does not that arise, in many cases, from the want of manure?—Yes; owing to the poverty of the people they have no land of their own, and consequently they are obliged to pay so much an acre for land to plant potatoes on; the land may either be manured by the farmer, or burnt land, which will produce a crop without the addition of manure.

2853. What do they pay per acre for such land?—That varies very much in different parts of the country, say from 5*l.* to 8*l.* an acre.

2854. Is not the system of burning land in that way very injurious to the soil?—That depends upon the nature of the land; if it be moor it is not injurious, if it be shallow upland it is very destructive.

2855. Do you suppose that a family consisting of a man, his wife and four children, can be fed and maintained upon wages throughout the year of 8*d.* a day without the assistance of the con-acre?—Yes, under ordinary circumstances.

2856. Supposing him to buy his potatoes at the ordinary average rate at which they are sold?—I know that many do so, but if con-acre can be had at a moderate price, the labourer is better off by taking potatoe land.

2857. Are you acquainted with the Harbour of Valentia and the adjacent country generally?—I am.

2858. You are aware that it has been recommended by some of the first nautical authorities, that that is one of the best ports for a communication between Ireland and America?—I am.

2859. Are you sufficiently acquainted with the country and its neighbourhood to say what are the facilities for the construction of a rail-road from that harbour to a central district of the South of Ireland?—Near to Valentia considerable difficulty would arise in consequence of the nature of the country, but that only applies to the last 20 miles; to the eastward of that point no particular difficulty would arise.

2860. Do you consider that the formation of a railway from the most eligible eastern port to the most eligible western port of Ireland, for the purpose of a communication between this country and America, would be of great utility to the British nation in general?—That is a commercial question, and perhaps political one, which I have not sufficiently considered; but I think it would be of very great advantage to Ireland.

2861. Do you consider that the return of such a work, taking Ireland alone into consideration, would be such as to authorize the outlay that it is estimated would be required for such a work?—If Ireland was to be the sole object, I think a rail-road to Valentia would not answer; but a rail-road from Dublin or Waterford to Cashel, which would pass through the best part of Ireland, would probably become a remunerative speculation.

2862. Would not the line from Dublin and Galway be shorter and also easier of connexion than the line from Dublin to Valentia?—Yes, it would be shorter and perhaps easier of execution.

2863. Would it pass through a district equally fruitful and affording an equal quantity of produce to be transported, and an equal number of passengers to be conveyed?—It would not pass through so fruitful a country nor would it pass through so many towns, and consequently I think it would not be so good a speculation; at present there is a canal from Dublin towards Galway as far as Ballinasloe, and if there was to be any communication further westward, I should recommend either the continuation of the canal or a rail-road from Ballinasloe to Galway.

2864. The proposed railway, then, would pass through Cashel, and would be a main trunk to the cities of Kilkenny, Waterford, Cork and Limerick?—Certainly; and in selecting the line I would make a main trunk through the country, from which branches might be made to those towns without taking it direct to the towns, which might be inconvenient.

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2865. Is not the con-acre and burning system gradually exhausting much of the stability of the best soils of Ireland?—It is; where shallow soils are burned it is very injurious.

2866. Would not the employment of the poor on public works tend to prevent the necessity of their resorting to the con-acre system for a maintenance?—Yes; nasmuch as it would enrich the people, and they would not require it.

2867. It would enable them to live?—Yes, and increase the quantity of cultivated land.

2868. Would not labour be then profitably employed in improving the surface and increasing the value, which is now neglected and deteriorated in value?—Certainly.

2869. Are you acquainted with the College estates in the county of Kerry?—I am.

2870. Will you describe their condition?—The College estates are situated in three parts of Kerry; in the barony of Iraghticonnor, which is situated on the north, near the Shannon, in the barony of Dunkerron near Kenmare; and also in the neighbourhood of Valentia in the barony of Iveragh, the College possesses 50,000 acres of land in the county of Kerry, which is situated principally in the barony of Iraghticonnor. The land in that barony is in a wretched state of cultivation, and I think, as far as I can judge from the appearance of old houses and old improvements, that generally speaking it was in a better state 50 years ago than at present.

2871. To what cause do you attribute the circumstance of that district has not advanced in a similar degree with the rest of the country?—To the nature of the tenure chiefly.

2872. Will you describe the nature of the tenure?—It is similar to the tenure given by Bishops; the leases are for 21 years, and they are renewed once in every three years, when a renewal fine is paid.

2873. You think that such a tenure has a tendency to discourage the improvement in land in Ireland?—I think it has; and I am of opinion that it would be desirable that the College as well as the bishops should have the power of granting long leases, under proper restrictions.

2874. Besides College lands, are there not large possessions belonging to the trustees of Erasmus Smith?—There are.

2875. Are they situate in the same manner?—To a certain degree; I have had much communication with the Board of Trustees of Erasmus Smith's Charity, and I have found them very attentive to the improvement of land; considerable reductions are made to the tenants for certain improvements, and frequently improvements are undertaken at their own expense. I know one that was effected at a considerable expense in the county of Limerick; particularly embankments along the Bilboa River, which have produced very valuable effects in saving the adjoining lands from floods.

2876. In your opinion, would it not be beneficial if a larger power was given both to the College and the Trustees of Erasmus Smith's School?—I think it would.

2877. To what extent would you go in the way of leasing?—From 60 to 99 years.

2878. Would not the consequence be a better cultivation and improvement of the land?—I think so.

2879. The College has estates in Galway also, has it not?—I do not know, but it has estates in other parts of Ireland.

2880. You have not observed the same disposition on the part of the College to improve their land, that you have described in the case of Erasmus Smith's Trustees?—I have not.

2881. Will you describe, in detail, the process which you adopted in the reclamation of the bogs at Pubble O'Keefe, upon which you are now making experiments?—I have not the detail with me, but I will send it to the Committee immediately after my return to Ireland.

John Spencer, Esq. called in; and Examined.

John Spencer, Esq.

2882. YOU travelled throughout a considerable district of Ireland last year, as an assistant commissioner on the Irish Poor Inquiry?—Yes.

2883. Did you turn your attention to the subject of the fisheries in Ireland?—I did a great deal, particularly in the counties of Clare and Mayo.

2884. Have you reason to suppose that the fisheries have been taken advantage of

of to as full an extent as they are capable of affording employment to the poor, and adding to the resources of the country?—By no means.

2885. To what circumstance do you attribute the want of attention to such an important source of national wealth?—The deficiency appeared to me to have originated principally from the poverty of the lower class of fishermen, and from the commission of the Fishery Board ceasing, which took place in 1830.

2886. The Fishery Board was in the habit of granting bounties?—Yes; the Board was in the habit of granting bounties, which ceased on the 5th of April 1830.

2887. Has there been any decrease in the fisheries since that period?—By all the accounts that I have received, it is evident that the decrease has been very considerable.

2888. Your inquiries had reference to the fishing on the coasts of Mayo and Clare entirely?—Yes; and I would wish to add, that they are private inquiries, and were not in my instructions; therefore I cannot speak to them so pointedly.

2889. Have you formed any estimate of the number of fishermen employed at present on those coasts?—From the observations of the men I have examined, I should think there may be probably about 3,000, not more.

2890. Have you had occasion to observe a want of accommodation in the way of piers on those coasts for the fishermen?—I have, very much so.

2891. Does the sun-fish or the whale visit the coast of Ireland?—The sun-fish at about ten leagues off the west coast of Clare frequent it every season, which is in the month of April.

2892. Was the result of these inquiries such as to induce you to believe that these fisheries might be prosecuted with success upon that coast?—It is my opinion, to a very considerable extent. If the fishermen were well supplied with fishing tackle, Kinsale hookers and other boats, great advantage would accrue both to the public and to themselves.

2893. In what way do you think that it would be in the power of Government or Parliament to assist in this description of enterprise?—Government might, partly in the way that they did before, by forming a Board of Commissioners, and purchasing Kinsale hookers, tackling and other things necessary for fishermen, and lend them out on security, which they might easily do to the fishermen generally throughout the coast.

2894. Do you think that English capital could be turned with advantage, and considerable profit, to the Irish fisheries?—I do; there is a field open for the supply of England and Ireland, the West Indies, and most of Europe, and 80,000 or 100,000 expert fishermen would find full employment, and give support to a million of persons.

2895. The Board of Public Works in Ireland have, you are probably aware, recommended the appointment of a local commission for the purpose of inquiring into the Irish fisheries; are you of opinion that such a measure would be beneficial?—I am quite sure that such a measure would be beneficial, inasmuch as it would pourtray those advantages that cannot be brought forward to the public view in any other way.

2896. Do the Dutch, French and other vessels fish on the west coast of Ireland?—By a letter that I have lately received from Lieutenant Boroughs, commander of the coast guard, I am informed, that he has lately seen a Dutch fishing vessel on the coast of Clare. Another letter of this gentleman's, containing very valuable information upon that subject, I would beg to read some extracts from: "Sir,—An article contributed to the United Service Journal in December last, on the subject of porpoise fishing, induces me to send you the following remarks on the fisheries of the north-west coast of Ireland, from the north islands of Arran to Killala, principally on the coast of Connemara and Mayo. At the period when Cromwell had kicked the Dutch away from this coast, and erected forts of considerable strength and beauty in the islands of Arran and Innisbofin, to prevent their re-assuming these stations, the fisheries seem to have dwindled into progressive insignificance, and are at this moment totally neglected. The station or harbours which they frequented appear to have been the islands of Arran and Boffin; the fort erected at the entrance of Boffin harbour must have rendered not only the harbour but the entire island impenetrable, as it commands the entrance of the harbour; and the only beach on the island where a landing could be effected, and only distant a short half mile; the other coasts of the island are one chain of iron-bound cliffs and inaccessible rocks. The harbour of Innisbofin is the best and

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safest I have ever seen for all vessels under 150 tons, and would contain 200 of different sizes, and is situated in the centre of the fisheries; there are many other capital harbours opposite on the main land. This island is now the property of the Marquis of Sligo, a nobleman who orders every accommodation to all strangers who may visit the island for business or curiosity. It is very extraordinary, and still very true, that this coast (one of the best fishing coasts in Europe, abounding from the most productive whales, both spermaceti and Greenland, to the common herring), possesses the worst and most ignorant race of fishermen, and (with a few exceptions) very indifferent boatmen. But the cause of these remarks may be easily accounted for, their poverty, which prevents them from procuring proper stout vessels for so dangerous a coast, and almost total absence of all patronage and support to follow up with energy and spirit the unbounded sources of wealth which nature has thrown within their grasp. It may appear still more extraordinary to those connected so expensively in the Greenland and South Sea Whale Fishery, that they should so long have remained in the ignorance that those fish abound on the coast which I have described. In order to give proof to so bold an assertion, I shall state some circumstances which came under my own immediate observation in my own vessels, and a subsequent period in command of a Revenue cutter prior to this fine class of vessels being placed under the inspection of rulers in the Custom-houses of London and Dublin. I shall first observe respecting the whales, to prove beyond contradiction that they abound in the summer and autumn on this coast. In company with the Rev. Mr. Mahon to the sun fishery at Bofin Island, we strayed on a blustry day to observe the coast and breakers; at a short distance from the shore we saw several large fish, which I supposed grampusses or finners, and had taken shelter under the lee of the island; still looking closely at them, they advanced towards the rocks immediately under the cliffs, where we had a perfect view of them at a distance of 500 yards with a spy-glass, their double-tufted heads quite conspicuous, and no intervening back fins; I concluded at once their species. In the month of July, after the sun fishery, a large spermaceti whale was drifted on shore dead at the Bay of Bunowen, in Connemara, about two leagues from Cliffden or Ardbear Harbour; in consequence of the ignorance of the peasantry and boatmen, and continual squabbling and fighting, three-fourths of the oil was lost; the surface of the bay was dyed with a rainbow tinge from the floating particles of oil; shortly after an immense fish was towed into the island of Turk by three of the island fishing boats; the monster was observed floating about a mile from the island, and had been but recently killed, but how, could not be ascertained; this fish completely filled up the small and only inlet in the island, and measured in length thirty-three yards; it was claimed by the proprietor, I believe the Archbishop of Tuam, who, I had been informed, gave it up to the islanders. A small village near the place where they had towed it to shortly became deserted, the inhabitants never calculating on the fœtid air caused by their imprudence. The islanders were two months employed in cutting up and launching over the cliffs the bones and remains of their prize. About the beginning of August, after having taken shelter from a north-wester in Blacksod Bay, I was ordered by the captain of the Harlequin, 18-gun brig, to proceed with his purser, Mr. Sparling, to West Port (I mention this as a proof of my recollection); in beating down the bay with light airs, and near the islands of Inniskeas, two large whales came nearly alongside the cutter; the day very fine, and making but little way, I ordered the gig and jolly-boat out and pursued them, and had I men sufficiently acquainted with the art, I should have succeeded in killing them; they allowed me to go alongside them; and I had only desisted from striking them by the bowman, who intercepted me at the moment by panic, fearful of the event of a lash of the tail. What the result might have been I know not, but nothing could have been easier accomplished than striking them, and only in 15 fathoms water. I had been after these whales three hours, and they never went above about 300 yards from our boats, and at that distance turned their huge heads towards the boats, and got wary. I gave up following towards evening; had I struck them at the commencement of our chace, when they were perfectly tame, I might have succeeded, even with the sun-fish spear and line, owing to the small depth of water. I will now advance one more proof of the whale resorting to this coast. In the month of August, cruizing off Broad Haven, county Mayo, I fell in with a perfect fleet of whales, which surrounded the cutter; I would say about 15, probably more. About the 15th of April the ponderous fish make their appearance a few leagues west of Innisbofin; their length in general is from 40 to 50 feet; they in fine weather come to the surface about

about one or two o'clock afternoon, and remain so until about nine next morning, and again rise at the same hour; they are struck by a rudely constructed spear, with a wooden shaft. Three lines of inch-and-half rope, each line about 40 fathoms long. These fish are easily struck by keeping behind the back fin; their eyes are so placed they can only see directly forward. They appear in immense numbers; I have seen, at times, leagues around the surface actually speckled with them, and at the same time about 200 boats from different parts of the coasts of Galway and Mayo, each boat having a fish harpooned, which is known by the boat lowering down her sails; it generally takes about four hours to kill a single fish. This depends much on the activity and caution of the crew, both of which are necessary in taking these fish, for should they bear too hard on the harpoon before the fish is exhausted, the spear is apt to give way, and the fish sticks close to the bottom, and must be forced up; when at the surface he is again struck and secured on his back alongside; he is then cut across the breast, and next longitudinally; a rope is then made fast to the strong tendon, which connects the two lobes of the liver, and is disconnected from the internal part of the body. A small pull draws it out; it is then cut into large pieces and barrelled until the opportunity offers to render it into oil. Each liver averages a ton of oil, of the best kind, and without the slightest smell; this oil is far superior to any fish-oil I have ever seen. I have killed six of them at different seasons, choosing out of the flock the fish with the largest back fin. They are a species of shark; they remain six weeks on the coast, perhaps longer; they then go to the northward. It is rather curious that these fish, when struck, tow the boat due north; this fishery also has been neglected these last five years; nor even have the fish been looked after. The fishermen on the coast are too poor to fit out their boats with the trifling apparatus; and when they did fit out at Galway, and got the necessaries on credit, if they had not been fortunate, their boats on their return were seized and sold by the creditor. During my three years' cruizing on the north-west coast, I had been ordered by Lord Colville, then commander-in-chief at Cork, to take (according as my other duty might permit) the protection of the fishermen during the absence of the Plumper gun-brig, which vessel had been ordered to Plymouth for a refit. This circumstance gave me an opportunity of observing closely the manner in which it had been conducted; there were generally about eight schooners or wherries, fitted out from the Skerries, situated at the opposite side of Ireland, with crews of ten men each; their lines sometimes extended to the length of ten miles; this depended on the state of the weather; their large stacks of fish at Bofin and Blacksod Bay consisted in cod, ling, glapen. The skates were also saved, and used as slates to protect the other fish from rain; they generally went back at the end of summer with a full freight, and sold in the Dublin market. The fishermen on the immediate coast were seldom or ever employed by them; they were considered perfectly by these expert fishermen, and even never profited by the example which was daily before their eyes. Each boat was provided with a thrale to procure bait, which were chiefly congers, turbot and plaice. Their provisions consisted of bread oatmeal, and tea; of course, abundance of the finest fish. If at any period a company should start up to try their hand at these valuable fisheries, I would recommend the following preparations. The expense to a company would be trifling, and might lead to a greater scale. Two fast sailing schooners, of 150 tons each, provided with every article for the whales and sun fishery; each vessel to have attached to her four whale boats, and manned with expert and approved whalers. They should rendezvous at Innisbofin. I have already remarked they should arrive at the island about the 15th of April. Each crew should consist of 24 men, in order to full-man each boat, particularly for the sun fishery, which would occupy all the boats. Each vessel should have two large boilers, and should be well provided with casks, and partly ballasted with salt, or even laden with that article, which could be stored on the island; the frequent want of which I have often observed, caused the loss of hundreds of barrels of herrings, and were afterwards used as manure."

2897. Are the fishing piers well built, the sites properly chosen, and are they kept in good repair?—There are few fishing piers on the coast of Clare, Galway, or Mayo, and those in general badly constructed, and the sites badly chosen.

2898. And many of them falling out of repair?—Yes; some of them falling to decay. At Seafield the fishermen can approach only at spring tides, so that, in fact, this one is partly useless; but if a sum of money of about two hundred pounds was expended upon it, it would open the passage, and perfect security would be given to the whole of the fishermen of that neighbourhood, and to very

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large vessels besides. Captain Marshall of the coast guard has given a statement to me that two hundred pounds would be advantageously laid out in opening this reef of rocks, and that eighty fishermen had given in an offer, each, of three days' labour gratuitously, to perform the whole of the work. There is another pier at Liscannon, and there is one in the great isle of Arran, which would very much assist the fishermen if some expense was laid out upon it. And in the south isle of Arran there is a safe place for all fishing vessels, if an approach could be obtained by cutting through a reef of rocks of two hundred and sixty-three yards; this may be called a dock, in the form of a triangle, having three sides, about five hundred yards each, having seventeen fathoms of water and good holding ground, where a vessel of any size might ride in great safety, and at any point of the wind. These two hundred and sixty-three yards of rock would, probably, be cut at the expense of two thousand pounds, by which it would become one of the securest places on the coast of Clare, or within a any distance of Galway. On the coast of Connemara there are very few piers, in Blacksod Bay there is one; there are none in Broad Haven Bay, which are very much wanted.

2899. Have you formed any estimate of the number of piers which would be required along that coast?—There are only about 12, I believe, and a much greater number would be very useful.

2900. Between what limits do you speak?—Between Loop Head and Blacksod Bay and Broad Haven Bay.

2901. Have you any return of the number of persons engaged in the fisheries in Ireland?—I have one which I have taken from the Tenth Report of the Commissioners on Irish Fisheries, showing an increase of 27,262 within eight years, the numbers being in the year 1829, 36,159, and in the year 1832, 63,421, viz.

5 April 1822 - - -	36,159	5 April 1826 - - -	57,805
Ditto 1823 - - -	44,892	Ditto 1827 - - -	58,044
Ditto 1824 - - -	49,448	Ditto 1828 - - -	59,321
Ditto 1825 - - -	52,482	Ditto 1829 - - -	63,421

2902. Have you paid any attention to the waste lands in the counties you have visited, with a view to their improvement?—In passing through the country I have paid some attention to it.

2903. Have you any suggestion to offer upon the subject?—I think one great improvement would be, in the first instance, that all the boundaries between proprietors of bog and waste lands should be throughout Ireland ascertained and settled by Act of Parliament.

2904. From your observations in Ireland are you of opinion that the improvement of the country may be materially advanced by a judicious expenditure upon public works?—Certainly.

2905. What description of public works do you consider most desirable?—I should recommend roads being made in every part of Ireland that could be done judiciously, for I think that would prevent illicit distillation as much as any thing by giving facility to bringing corn into the market, which they have not the means of doing now for want of roads.

2906. As assistant Poor Law Commissioner, have you been lately inquiring into the state of the poor at Munster and Clare?—Yes.

2907. Is there not a great want of employment for the population there?—Yes, there is a great want.

2908. And you would recommend there being a system of public works under the superintendence of a board?—I should recommend the improvement of the country by all means, by public works of every sort that could be adopted, under the superintendence of the Board of Works.

James Naper, Esq., called in; and Examined.

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2909. DO you reside in Ireland?—Yes, I have resided for 20 years in Ireland.

2910. Are you not a large landed proprietor there?—Yes, a considerable landed proprietor.

2911. Have you turned your attention to the system of public works, and also to the improvement likely to arise from encouragement in that way?—I have done so.

2912. Has there been any public work executed in your part of the country?—None, that I am aware of.

2913. Is there any want of roads in your district?—No, there is no want of roads.

2914. What

2914. What part of Ireland do you reside in?—The county of Meath.

2915. Are there not parts of that county which might be very much benefited by a system of drainage?—There are very few farms in the county of any extent that would not be benefited by a system of drainage.

2916. How does it happen that they are not properly drained?—There is a great difficulty in the way of getting the landlords to unite in any system of drainage.

2917. In your opinion, might not a very salutary power be given to the Board of Public Work for that purpose?—I think it might.

2918. How would you propose the expense to be defrayed of such an undertaking?—I would propose the expense to be defrayed by a per centage upon the income of the landlords.

2919. Do you mean according to the benefit to be derived to the land so to be drained?—No, I do not; I conceive, that if the present system of road-making, which is now under the superintendence of an engineer, if that system, instead of being performed by contract, was performed by day-work, under a general system of road-making throughout Ireland, that we should have a mode of work very superior to any thing yet introduced. I would suggest that the cess, which is now paid by the tenant for repairing and forming new roads, should be paid by the landlord, and I would add cess for public drainage also. I do it upon this principle, having found where the tenantry were making improvements in the way of fencing that when they came to the present roads, they have had great difficulty in making those drains work. Having as a landlord, in more instances than one, introduced an extensive drainage, in conjunction with other landlords in my neighbourhood, those drains have generally exceeded in expense the first estimate, and the landlords have been so much disappointed at finding greater charges laid on them than they were led to suppose were necessary for the purpose, they have refused to keep those drains open, or to take any steps to render them advantageous to the land through which they pass.

2920. Are you speaking of main drains at present?—I am speaking of main drains between the different estates.

2921. Under what description of administration would you place the expenditure of the road and drainage cess?—I would suppose, in the first instance, that the engineer laid before the baronial committee the plan of the drainage, together with an estimate of the necessary expenses.

2922. Would you propose that that taxation should extend to land that did not want draining, as well as that which did want draining?—I should propose it should be a general taxation on the barony.

2923. Would it not be hard on those persons whose ground did not want any draining whatever, and would it not make of more value lands that did want draining, that are at present of great value?—As this would be a permanent tax upon the landed proprietors of the barony; in the first instance, many of them, particularly those whose property is in a state of good cultivation, would not be benefited, yet, as the tax would be placed upon the income of all, a considerable sum would be expended, and after the system of drainage had been completed, many other objects might be brought to bear, and this tax might eventually embrace a method of altering the fencing, and the introduction of water, instead of taking it off.

2924. By whom do you think the barony committee should be appointed?—I think the baronial committee should be appointed upon the same principles as the present barony road committee.

2925. Elected or nominated, and consisting as at present of the magistrates and the cess-payers?—Yes, of the magistrates and cess-payers.

2926. Consequently you would take the baronial session as at present constituted?—Yes; for the purpose of approving of the works, the whole would be laid before them. I will suppose 500*l.*, for the sake of example, was raised by a certain barony for the purpose of these public works, and that it was expended in repairing and laying out roads, and a system of drainage; but as the income of the barony increased, so would the sum to be expended.

2927. I understand, then, you would levy a fixed per centage cess on the rental of the barony, without regard to the particular demand for expenditure in one barony over another; you would have the same per centage levied all over Ireland?—Yes, the same per centage; the object being to place on the landlords that part of the baronial cess at present paid by the tenants for the repairing of roads.

2928. Since there are some baronies in Ireland that require an expenditure of this kind more than others, would it not be better to tax them in proportion to the

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expenditure required for those general objects?—It is not intended that the proposed cess should be so high as to meet the expense necessary for making the new roads or large drains; it is for the purpose of laying them out on a general and extended plan, to which the parties most interested should contribute their just proportion; if, for instance, there was a barony where there were very few roads, and in which the rental was very low, the landlords' tax there would not work to the advantage it would in a highly cultivated barony; it would have this effect, it would enable the engineer to lay out a fresh line of road, to which the attention of all the proprietors of the barony would be called; the sum would be too small to make the roads, and then I conceive the Board of Works would come in, and approving of the line of road, the proprietors, if they chose to have it made, might raise a sum of money for the purpose, and as soon as the roads were made and the barony became a cultivated barony instead of a wild one, then the Act which is working profitably in highly cultivated parts of the country would come into full operation.

2929. As I understand the taking a certain per centage on all the baronies in Ireland, you would have a large sum to lay out in the barony that required the least, and a less sum to lay out in the uncultivated barony that required the greatest expenditure?—Yes, upon the principle that the uncultivated tracts are those which have the least means; if the rental is small and the landlords wish to make a great improvement, they must borrow money.

2930. Would not it be as well to leave the barony properly managed at present and requiring little expenditure to go on as it does now, and to levy a tax upon the unimproved barony in proportion to the public works required upon the spot?—I believe there was a Bill brought in by Mr. O'Ferrall; that Bill has been little worked upon for this reason: the landlords are unable, without united exertions, to do that in their own barony which renders them anxious to take advantage of Mr. O'Ferrall's Bill; unless you can make drains through the barony on which you have property in conjunction with landlords in that barony, you cannot make use of Mr. O'Ferrall's Bill. Lowering the lakes or scouring the rivers is a matter of consideration for the Board of Public Works, and an engineer would say, "We cannot open the drains in this barony, because such a river is too high; a certain expenditure would enable us to lower this lake or that river, so that we might open the drains sufficiently. The great rivers and lakes must be a county concern, and the counties might cess themselves for the purpose. We want the concurrence of landlords to do individually what it is the interest of counties to do collectively."

2931. It has been suggested that the reclamation of bog and mountain lands would be carried to a much greater extent than at present, if landlords under strict settlement had the power of charging the estates with a certain portion of the money expended by them in permanent improvements; do you think there would be any objection to such a power being given, provided it was guarded with proper checks and controls?—No; I think it would be highly desirable.

2932. Would it not be a plan that would appear to answer the ends you have in view, if, instead of levying a per centage throughout Ireland, you were to allow the majority of cess-payers either in number or value of each barony to tax the whole barony for the execution of these public objects, the making of roads and the effecting of drainage, which you have stated as desirable?—My objection is, that you would not be able to introduce a general system; it strikes me that in England they shut up the energies of the country by resorting to the system of parishes; they are unable to work any great line of road or drainage without obtaining the goodwill of the different parishes, who imagine they have all separate interests. In Ireland we are not hampered by the parish laws of this country, and it seems a great object now, that main drains and useful roads should be carried on by skilful persons through all property, so as not to come in contact with local prejudices.

2933. Inasmuch as the baronies are more extensive in Ireland than parishes in England, would there be any danger of a want of co-operation in two contiguous baronies in any great work, or, if it existed, might it not be removed by general powers being given to the Board of Public Works to execute large improvements in whole counties?—Certainly; if sufficient power was given to the Board of Public Works, that would prevent it. I strongly feel the necessity now for some kind of taxation that will reach the receivers of rent. I find in so many instances in Ireland the landlord that is most injurious to the country is, not the absentee landlord who is master of his own property, but the persons who derive large sums of money as interest for money advanced on the security of property.

2934. You propose that the county cess should hereafter be laid upon the landlord;

lord; how would that interfere with the existing interests?—I would propose that the landlord pay that part of the county cess which seems to me particularly to improve his interest.

2935. Suppose a tenant holds a lease for ever of an estate worth 1,500*l.* a year, and he pays out of that a head-rent of 1,200*l.* a year, having only a profit of 300*l.* a year, by throwing the county cess upon the landlord he would become chargeable for a heavy tax to which he was not hitherto liable, and which he has not contemplated in making the contract with the tenant, who is the immediate occupier of the land; how would you prevent the injustice of such a case?—A lease for ever I conceive to be a mode of alienating property, the equivalent for which grant is a certain annuity for ever.

2936. In the case which has been stated to you, would you throw any portion of the burden of the county cess upon the ultimate landlord, who receives the 1,200*l.* a year from the lessee, who is in the actual occupation of the permanent inheritance of the land; would you throw any portion of the tax upon him?—Yes; I would throw a portion of the tax upon all receivers of rent; I am aware of the case you mention: the landlord who lets his land for ever at a certain sum stands in the situation of an annuitant; it will be a proper matter for consideration, whether that interest is equal to the interest of the landlord, who could increase his rental on the increase of the value of his property.

2937. Would you contemplate the receipt of the whole cess from the occupying tenant, or only a portion of it?—Only a portion of it.

2938. By a fixed per centage upon the value of the land?—Yes, by a fixed per centage upon the value of the land.

2939. Have you formed any estimate of what per centage upon the rental the proportion of cess borne by the landlord would amount to?—In the barony in which I live, and have considerable property, I have endeavoured to form an estimate.

2940. What is it?—I conceive, if a landlord paid five per cent. upon his income, that it would be amply sufficient to keep the roads in a thorough state of repair, and also to introduce a system of skilful drainage, which might eventually be extended to the making of proper fences, which ought to act as drains, but which do not do so at present.

2941. Is not your proposal open to the same strong objections that prevail against tithes, and every other fixed per centage levied upon the improved value of land, inasmuch as it becomes a tax upon the money laid out in improvements, increasing according to the increased value of the land?—The object of the tax is to promote all purposes of improvement. The more you improve, the more you will add to the means of improvement. If I had an income of 5,000*l.* a year, I should pay 250*l.* tax upon it, and in proportion as my income increases, in such proportion am I additionally taxed; but I conceive that the result of such payment would be, that the landlords of Ireland would introduce a better system of husbandry, and eventually let a great portion of land, now a dead weight on their hands. Every farm which is left by the outgoing tenant with the fences in proper order, and the roads in proper repair, will always produce a great increase of rent.

2942. Put the case of two estates of equal value in Ireland: upon the one the landlord lays out no money of his own, but the improvement is carried on by the expenditure of the cess which is levied; in the other, the landlord expends 1,000*l.* of money of his own in improvements; the latter landlord would have an increased tax to pay in consequence of the expenditure of his own capital, while he would receive no further benefit from the expenditure than the other landlord, who pays nothing at all of his own for improvements?—The great difficulty which a landlord appears to lie under now who is improving, is this, that the landlords about him will not improve; and it is almost impossible for him to make a fair return of the capital he has expended. The few landlords who have laid out much money in Ireland for the last 20 years have come to a complete stand still for want of junction with their neighbours. I have myself built a house, at very considerable expense, and which might be called almost a public work; but the consequence of stopping now is, that I am surrounded by a pauper population, who settled upon some of the farms held by middle men for the purpose of obtaining employment upon this work.

2943. It has been suggested to the Committee that where the public in general are called upon to grant money for making roads through wild and uncultivated districts, and where a great benefit results from such an expenditure to the pro-

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prietors, that it would be only fair to expect that those proprietors should consent to give up to the Crown a certain portion of land in consideration of the benefit which they derive, such land to be re-sold to any of the industrious poor, who might be able to accumulate sufficient to purchase it; do you see any objection to such an enactment?—I think the same object might be obtained in a great degree without alienating the property. The proprietor, supposing he was under strict settlement, might, according to the situation in which he stood, as having a power over his property, be enabled to let leases for a certain period without giving the property up to the Crown.

2944. That would involve no sacrifice on the part of the landlord?—No, I do not conceive it would.

2945. Your proposition supposes that it would be desirable to secure the peasantry a certain portion of the benefit derived from the expenditure on public works in opening the country, by making roads and drains across it, allowing the owner of the lands to make what terms he chooses with the tenant in leasing out the improved lands, there would not be such security for the benefit arising to the peasantry as if a portion of land was placed in the power of the Crown to be sold and leased on long terms in small lots to the peasantry, as they required it?— I consider a system of leases might be struck out by the legal authorities, which would work in this way. If the proprietors were complete masters of the property, of course they would let it upon any terms that they chose; but if they were strict tenants for life or under mortgage, or liable for debts, securing the interest and principal that had been applied upon the land as a charge upon the land, they might be allowed to let such advantageous leases as would induce persons to become tenants of the property. The objection I have to the proposition made, is the fear of introducing a system that would at first appear to be so much more advantageous to the tenant than any system that now exists among landlords in Ireland, that we should have these estates taking away some of our best tenantry.

2946. Do you not think the improvement of waste lands is carried into effect most beneficially by the tenants themselves having a permanent and durable interest in such land?—I do not conceive long leases to tenants without considerable capital desirable leases, or that they are in every instance advantageous either to the tenant or the landlord; on the contrary, in Ireland it is generally believed that leases for three lives or 31 years, have been most disadvantageous to both parties.

2947. Do you not think it would be sufficient, instead of laying the burden of a public tax upon land, which you propose, if the landlord was obliged to pay the cost for all that is useful and real improvement; do you not think that much fairer than an indiscriminate taxation upon land?—The great object I wish to obtain, and the great difficulty in obtaining it is this; if you leave the improvement to be carried on partially, you do not introduce a general system in order to enable a great local improvement to go on; the sum of money to be expended should be under the direction of an able engineer, and that engineer appointed under the Board of Works. I do not conceive agriculture in Ireland is at all equal to what it might be; and I think we have the means of introducing a high state of cultivation in the country, and there would be a constant field as well as a constant fund for carrying on the suggestion of able men.

2948. Take your county for instance; in your county there is not any waste land or land that wants to be reclaimed, but it is badly cultivated and badly farmed; does it not want more the improvement which good farmers would give it, than it wants to be improved by draining and laying out new roads?—I did not contemplate the laying out and making new roads; I only conceive that the cess would amount to a sufficient sum to keep in repair the roads now laid out upon an improved system. If the engineer had a system of road-making for three years in succession instead of one year, then it would introduce the thorough art of road-making, and that is what we want now. A proper system of drainage, by being able to extend the drainage to a greater length, would be more complete than it could possibly be by individuals taking it up.

2949. Then is not the improvement principally required for the tenants, the better kinds of houses for the farmers, and it is not altogether the better system of farming, more than the want of reclamation of waste lands?—I consider we want both; the better system of houses must remain between landlord and tenant, but the making better fences might be easily done; it is all lineal work, and it could be done by measurement; the parties might be paid by the perch; it is a description of work that

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that would enable you to test the value of the labour, the value of which and that of time, are little understood either by the Irish farmer or labourer.

2950. You are too good a farmer not to be quite aware that a farmer must be a much better judge of what is the best place to make a fence than a civil engineer?—No, I do not think so, I think one of the greatest faults in our county is having fences too large, and that they have not been laid out on the principle of acting as drains to the fields they are in.

2951. Do you mean to say it would be highly useful or necessary that a civil engineer should lay the fences?—Not on every farm, but I conceive there are some of the immense fences which when they came to re-crop the ground, might be replaced by a much better style of fence altogether. They are quite ignorant of the better system of draining.

2952. Would not difficulties arise on your plan if the estate was in mortgage; how would you propose to get rid of the difficulty?—I propose that all receivers of rent on the property should stand in the situation of landlords, and that the person who collects the cess, his receipt should be available on the part of the tenant, and be received by the landlord as part of the rent. If the tenant pays me 100*l.* I should have 95*l.* and he would hand over the collector's receipt for the other 5*l.*, and if I owe the mortgagee 100*l.* he must receive the 100*l.*, minus the 5*l.* per cent.

2953. Would that not be very hard on the mortgagee who had not entered into such a contract?—I consider such is the state of Ireland, that unless all persons interested in land will submit to some sacrifice, that the property from which mortgagees expect their capital will, in a very short time, not be able to pay the interest of the money, much less the capital.

2954. Would it not deter persons from lending upon mortgage in Ireland?—It might do so; but I think it would be a great advantage if men were deterred in many cases. The return to cash payments has so much reduced the property of all landed proprietors, both in England and Ireland, that the loss to the mortgagee would not be at all equal to that which the landed proprietor of Great Britain bore when the return to cash payments reduced the principle and interest of their property.

2955. Your proposition is in the nature of a labour rate?—Yes; only it goes upon the landlords instead of the tenants.

2956. You consider all parties deriving any revenue from the land, ought to contribute to the relief and employment of the poor, through the medium of a labour-rate?—I would rather call it the landlords' rate; and perhaps I might add, that I am aware that without great consideration the different interests cannot be defined.

Veneris, 19° *die Junii*, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Mr. *David Aher*, called in; and Examined.

Mr. *David Aher*.

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2957. HAVE you any suggestion to make to the Committee connected with Public Works in Ireland?—I beg leave to lay this plan before the Committee, and which I consider, if carried into effect, would be a most useful public work for the South and West of Ireland.

2958. What is this plan?—To make a rail-road from Dublin to Kilkenny, 33½ miles of which will be a main trunk towards Limerick and Galway. The Kilkenny branch may be continued to Callan Fethard and Caher, where it would join the proposed line to Valentia. The levels are very favourable, and it will appear by reference to the section, that there are no slopes of more than one in 500, and between Athy and Kilkenny 33 miles are perfectly level, and passes through the eastern outgoings of several valuable beds of coal and culm, in the great Kilkenny and Queen's County coal district. This line of railway may be considered as a main trunk of communication between the South and West of Ireland and its metropolis.

2959. You are one of the engineers for the surveying of the bogs in Ireland?—I am.

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2960. Have you, in your Report, made an estimate of the expense of reclaiming those bogs?—I have.

2960.* Have you any reason, from subsequent experience, to change your opinion as to the facility of reclaiming those bogs, and as to the expense at which it could be done?—I have had some experience in the draining and cultivation of bogs since the publication of that Report, and I think that it will not require a greater expenditure than I have stated.

Mr. *John Thomas Cramer*, called in; and Examined.

Mr. *J. T. Cramer.*

2961. WHERE do you live?—At Rathmore, in the county of Cork.

2962. What is your profession?—My profession has been, for some years, that of agent and receiver of rents, and which I receive to a considerable extent in different parts of Ireland.

2963. In what counties?—In the counties of Cork and Limerick, Kilkenny, Carlow, Queen's County, Kildare, Wicklow and Dublin.

2964. In your capacity of agent and receiver, you have had opportunities of examining and seeing what improvements might be made in the estates over which you are agent and receiver?—Yes.

2965. Is there not a great quantity of land in those counties to which you have referred, of bog and mountain land capable of improvement?—The part to which I would particularly point my evidence, lies in the west of the county of Cork, and extends into Kerry.

2966. What description of land is that?—It is high land, commonly called boggy mountain, but all capable of improvement.

2967. At what expense can you state to the Committee per statute acre?—My evidence does not go to deep turf bogs, but simply to heathy mountain land, on which there is bog. The process of improvement as respects that, is very simple, and the expense very moderate; the operation is simply by burning; that is the first indispensable step, and from that two or three crops are obtained, which brings the ground immediately into a fit state for succeeding purposes of agriculture.

2968. What is the depth of the bog?—The depth of the surface varies from about a foot to a foot and a half or two feet.

2969. Does it give red or yellow ashes?—Reddish and black ashes, and a mixture of white also.

2970. Would it not require considerable draining?—There is great facility for draining the ground I allude to, because it is all upon the side of hills.

2971. What would the expense be of draining and reclaiming the land?—The expense of draining varies so much and depends so much on the local circumstances, that I could give no general answer to that, but it is very trifling; in consequence of the facility of taking the water off from those hills, there are rivulets in all the valleys into which you can conduct these drains; the expense would be very small; I have been in the habit of allowing from 4*d.* to 2*s.* a perch, which is almost the highest that has been claimed from me for making those drains; 4*d.* for the surface drains, and for the main covered carriers 2*s.*; when the ground is such as to require deeper cuts, which it will where the fall is not so great, the perch varies from 1*s.* 8*d.* to 2*s.* 2*d.*

2972. Do you propose to gravel before you burn?—No, we have no gravel.

2973. Have you clay?—None of good quality.

2974. What is the substratum?—A cold gravelly clay.

2975. Do you put any of that upon it?—No, there is sufficient surface without bringing up that which is quite unproductive.

2976. Is not the surface entirely bog?—No, there is a strong mixture of clay or loam in the surface generally.

2977. Have you ever brought into cultivation any considerable quantity of such land?—Yes, the country I allude to now extends from the west of Newmarket in the county of Cork, to where Mr. Griffith's new lines branch out; one of the lines goes to Castle Island in the county of Kerry, and runs nearly west; the other goes to Abbeyfail north-west. These are the two main trunks, and the country that I allude to lies between those two; and I would propose that new cross roads be made where there are none at present, intersecting the intermediate country, and connecting those main roads.

2978. Have you improved a large quantity of land?—I have; but the parts that have been improved are invariably confined to these two lines of road, and close

close to the bye-roads and old roads where passable; and just in proportion to the facility of communication with the main roads we find the improvement extends.

2979. Have you seen the improvements made under Mr. Griffith?—No.

2980. Are you aware Mr. Griffith thinks it necessary to trench the land as you have described to the depth of about 18 inches, throwing up nearly six inches of that substratum?—I have seen that substratum brought up in small quantities in tillage; where the surface is so light there must be a portion occasionally turned up, which in the course of cultivation will of course add to the depth of the surface soil.

2981. Do you mean to say you have no doubt the entire of that country would be reclaimed if the roads were opened?—Certainly; but these roads in order to communicate the greatest benefit to the country, ought to extend to the limestone quarries which are in the centre of it, and are at present inaccessible except at great labour and expense.

2982. How would you propose to make those roads as to expense, and so on?—The country itself is very poor and is not capable of paying for them. The grand jury of the county of Cork have to levy large sums; the county cess varies from 30 to 40,000*l.* every half year; the necessary demands of that very extensive county would probably operate on the grand jury, and justify them in refusing as much as would be necessary for the immediate improvement of these extensive wastes, which until those roads were made by Mr. Griffith, were wholly inaccessible.

2983. What would you think of this plan, Government paying a third, the county paying a third, and the proprietors being assessed for a third?—I should be very glad of it; the late Lord Lisle, who died last November, had authorized me to make application to the grand jury of Cork, and, to meet that very case to promote the cultivation of this district, intended to have given 400*l.* this summer in making roads, and which I should have expended, provided I was joined by Lord Cork, and had a probability of getting from the county some assistance, which I had little doubt of. As to the proposition of one third to be paid by the proprietors, one third by the county, and one third by Government, I should say that the Government should give more than that.

2984. Why?—Because the country is so very poor and inaccessible.

2985. Are the landlords poor?—The landlords must be poor as to the return from this particular district to which we are referring.

2986. Should you not have regard to the great advantage the landlords would derive from the improvement?—The way we have encouraged improvement in that district hitherto is this, leases are granted for 21 years or a life, and at a very low rent, 2*s.* or 3*s.* an acre, or somewhere thereabouts, and an allowance is made of one-fourth from that rent, provided the tenant proves to the satisfaction of the agent that he has expended that fourth in improvements, such as making ditches, banks and drains; and in addition to that there is a further allowance of 6*d.* a barrel for all lime that is expended on the reclaimed and improved ground, and ample allowance for new houses and barns.

2987. Do you find that method answer?—Yes, the allowance is always claimed.

2988. Do you find the reclamation goes on?—Yes.

2989. And at a proper rate?—Yes.

2990. What class of men do those persons become?—Respectable farmers; we prohibit in every case the possibility of their becoming middle-men.

2991. How?—By strict prohibitory clauses in the lease.

2992. Is that sufficient?—We find it so; and there is another check in the lease for 21 years; a man will not in that short period find it to his interest to become a middle-man. I am speaking only of what I experience myself, and I have found that so extensively, that I am quite satisfied it has a good effect; possibly it may not operate in other counties in the same way; I have found not only here, but in all other places a lease for 21 years with that clause, is an effectual check to subletting. I cannot say I know any instance where the farmer has parted with his ground.

2993. Not even to his family?—Yes, he may divide among his family, his sons. We always make exceptions in favour of the family; that is specially made in the lease.

2994. Would you allow a man to divide it, if he had ten children, to divide it into ten different portions?—If I were to be asked would I allow it, I should say I should not approve of it.

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2995. But he may according to that lease do so, may he not?—He may, according to the liberty we give him.

2996. Do you consider the system of giving 21 years' leases at moderate rents such as you have described to be necessary to encourage the improvement of this waste land by the occupying tenantry?—I think it sufficient to encourage the cultivation with the before-mentioned allowances.

2997. And that without such encouragement it will not go on so rapidly?—With that encouragement I have just mentioned that I have been authorised to give, I find it quite sufficient, and I do not think the improvement could go on so fast without that.

2998. Would it not be better to grant leases with three lives?—Certainly not; that degenerates into sub-letting.

2999. Could you not prevent sub-letting?—That brings you into litigation, which should always be avoided.

3000. Does it not give a better holding to the tenant?—It gives a longer period to the tenant, but I do not think it gives him a better interest in the farm; if he holds in fee it is very different.

3001. Do you not think the longer the lease a tenant has, the greater the encouragement is for him to improvement?—When a man has an extended period of three lives it always dwindles into sub-letting; then he goes away, lives on the profits as long as he can; it ultimately ends in his being ejected, and the estate is thrown into difficulty and disorder; the difficulty of recovering the head-rent from the occupying tenant that he lets in, and who generally is ruined by both parties.

3002. Would you not think it desirable, supposing Government was to grant or lend money to aid the reclamation of these wastes, and that terms should be made with the owners of the waste securing to the occupying tenantry the long leases on beneficial terms, or such encouragement as you have described to be desirable?—I think a certain portion of the reserved rent should remain in the hands of the tenant, provided they proved to the satisfaction of somebody that they had expended to the amount of the rent proposed to be reserved in those permanent improvements, such as making fences and ditches and drains, which are what is required in lands of that description. Where these roads are made we have improvements in cultivation increasing very fast, comfortable cottages, and the peasantry very much improved in their habits, and from being a lawless set of people they have become amenable to the law; and I know no part of the county of Cork which is now more tranquil.

3003. Can you depend on the landlords generally in Ireland offering such favourable terms to the tenantry who might settle on their wastes, supposing that waste to be opened up by a government expenditure?—I should not like to leave it to the landlords.

3004. How would you secure such terms?—It is very difficult; I can scarcely see how such terms could be secured.

3005. Would you think it just for Government to make that a condition of the grant or loan, if the means could be made available?—I think they might, on the fairest principles, because these lands are unprofitable until roads are opened; and I would recommend them to be made at the public expense.

3006. And being so made, would it be equitable that terms beneficial to the tenants should be made?—I think so.

3007. You are agent to a number of proprietors, are you not?—Yes.

3008. Do you consider, generally speaking, the condition of the peasantry is improved?—Very much every where.

3009. State the reasons that have brought that conviction to your mind?—I think there is more attention paid to procuring resident tenants; the leases are now given for shorter periods than heretofore, and the landlords look more to the selection of solvent tenants, men of character; the exorbitant rents that have been heretofore required are not demanded now to the extent they were; all these are reasons I find operating on the subject.

3010. One of the reasons for the tenantry improving, you mention to be short leases; state why you conceive short leases materially affect the condition of the people?—I have always observed, when the shorter period is granted, that the tenant becomes more attached to the soil, and never looks to sub-letting, or to extort from the industry of the people under him, what he ought to collect by his own industry from the land.

3011. Do you observe whether the clothing of the people is improving?—Very much.

3012. Do you find the use of wheaten bread extending?—I think it is not, but I think

I think their food is improving; I think they are better fed; they have more potatoes to eat, and consume more of their bacon and milk at home.

3013. Do you think the tenure of 21 years the most advantageous, under all circumstances?—Yes.

3014. Would the counties object to their contribution of one-third for making roads?—If these roads are made, and approved of in the usual way by the county surveyor, and that they pass the usual scrutiny of the magistrates and rate-payers at session, I have no doubt whatever the grand juries, as far as my experience goes of them in the county of Cork, would be inclined to grant the sums; that is, if they were not overburthened with other compulsory matters; nearly half of the sum collected by the grand jury orders is compulsory.

3015. Would the landlords, do you think, object to the contribution?—Small landlords would not like to give any thing; extensive landed proprietors, I think, would not hesitate to give a proportion, and a fair proportion.

3016. You have not stated to the Committee the expense necessary to reclaim the land which you state has been brought into cultivation?—The mere expense, independent of drains, (and that, as I mentioned before, is so uncertain, that I cannot be particular, except as to the rate,) the bare expense of bringing that land into immedate cultivation is about 20*s.* to 25*s.* an acre, and the expense of draining about 2*l.* an acre on an average.

3017. How does it happen that the landlords, then, do not themselves, to a greater extent, improve those lands?—The enormous expense of making roads has hitherto prevented it.

3018. Are there no other difficulties in the way?—I know of no other.

3019. Are there none in the way of settlements, and tenancies for life?—Where the return is so great as to make the thing profitable, I do not think that would operate as a bar.

3020. Nor in the way of incumbrances on the property?—I should think, where those incumbrances are not very heavy, they would not operate on it. I would suggest to the Committee (from the experience I have of the benefit) that grants might be made for the establishment of district farming societies; for the encouragement of the different objects of agriculture; the improvement of cattle, and introduction of better implements of husbandry; change of crops, and all that kind of thing. There was a good many years ago, a society of that description in the county Cork, which was established in a wild part of the county, lying between two arms of the sea, between the harbours of Cork and Kinsale; there the establishment of a farming society had the most beneficial results; small premiums were given for the introduction of particular crops, and improved habits of cleanliness and industry, and rewards for extended services and good character. This society dropped about ten years ago, from the death of our secretary, who was a very active man, and the having nobody to supply his place. At that time our ploughing matches were of that description, that we had from 15 to 20 or 25 ploughs brought into the field for competition. The improvement had become so great, that probably in the whole of that number there were not above two or three that you could say were badly managed. After an interval of ten or eleven years, this society has been again brought together last year, and although in that short period one would not suppose much had been lost, we found great difficulty in finding one good ploughman at our last meeting, which satisfied us all of the utility of institutions of that kind. Now, I think the plan I would propose would be, that the Government should give for that especial purpose 50,000*l.* to be distributed in Ireland; that would give very little more than a thousand to each county, which would be very small, and the overplus might be given to the larger counties.

3021. Would that be sufficient to establish such societies?—I think it would, and that it should be given only where subscriptions were collected in the particular district.

3022. To what extent?—You might give as much as the subscription would amount to.

3023. Would 2,000*l.* be sufficient?—I should think it would in the large counties, and 1,000*l.* in the small; these societies ceased altogether, when the small Government grant was withdrawn, which was very injurious in their respective districts.

3024. Was it an annual grant?—The Cork Institution had an annual grant of 700*l.* for the special purpose of promoting agriculture; and even that small sum did a great deal of good. Unfortunately, in the annual grant to the Cork Institu-

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tion of 2,700 *l.* they took off the 700 *l.*, which I thought was the most valuable and beneficial part to the public; the remaining 2,000 *l.* was continued for some years, without much apparent benefit to the country.

3025. Have you any other suggestions to make?—I think in the establishment of the county engineers, that the number is not sufficiently great for the useful purposes of the country; in the county Cork we have but two; it is quite impossible that any two men could do the duty as it ought to be done, and consequently at the last grand jury we had several roads before us that we were obliged to reject altogether, or else to pass without sufficient and satisfactory information, in consequence of the engineers finding it impossible to go through the county in the time limited.

3026. Are your engineers experienced men?—They are experienced and active men. There is another point which I should suggest; all along the sea coast on the south-west of Ireland there are promontories that extend a great way out; these are more or less neglected in the way of roads and communications, and I think that some of the public money might be given advantageously to open lines of communication between those promontories, by crossing the arms of the sea or the rivers that are at the upper ends of them. Generally a road runs through the centre, from the extreme point of these promontories, always a bad one, and generally the only one they have on those promontories, (some of which are extensive) to the market town; whereas a bridge over would connect immediately with it, and be highly beneficial to the country at large. The district I more particularly allude to is the town of Kinsale, which at two sides is in the way I have mentioned; an arm of the sea on one, and the Bandon River on the other; the communication from that district, which lies on the other side of that river, is seven or eight miles up; and by erecting a bridge from the town of Kinsale directly across, it would bring that district, which is extensive and all agricultural, and very populous, immediately into the town.

3027. Why is not that done by the county?—The county, as I said before, cannot allocate larger sums than they are doing now. When you consider there is from 70 to 80,000 *l.* collected in the county, independent of the city of Cork, and from its very great extent, from the expense of new roads opening into these wild districts, most of which are kept in repair by the county and other necessary charges; the county cannot give the large sums necessary to expedite or bring into improvement all the different parts of the county.

3028. Would it not be advantageous to the landed proprietors to do these things?—The landed proprietors happen unfortunately not to be very rich there.

3029. Are the entire of these expenses levied on the occupiers; the county cess?—Entirely.

3030. No part contributed by the landlord directly?—None; it is always paid by the occupying tenant.

3031. Has there not been a great increase of this expenditure of late years?—I do not think it is so great as it was; it is considerably under what it was heretofore, twelve or fourteen years ago, I am sure it is.

3032. Why should you expect Government would contribute, as you have now mentioned?—Merely from the extent of the country that would be benefited by it, the general improvement that would result to the town of Kinsale, having a population of 9,000 souls debarred by natural impediments from nearly all communication with the neighbouring districts, from opening a short and easy road from the important naval and military station of Cove of Cork, through Kinsale to Clonakilty and the west of the county, expediting assistance, in case of shipwreck, for protection of life and property, and many other equally important reasons.

3033. It is not a poor country, is it?—Yes, it is a poor country; a high hilly country. At the last assizes, at Cork, we granted seven hundred pounds for the purpose of opening a line of communication immediately opposite the town of Kinsale, into that district which lies on the other side of the river. Now, in order to render that perfect, we want a bridge; and the country is too poor to admit of the sum being levied, which would be necessary for that purpose, it being a deep river, and in some cases a rapid river.

3034. Do you not think it fair the landlords should contribute part of the expense of making these roads, which cause a permanent increase in value?—I think the old system of requiring the tenant to pay the charges, which is the customary one in Ireland, was wrong.

3035. With

3035. With regard to county cess?—He is obliged to pay the county cess by his lease; that falls on the tenant universally. In granting new leases, of course a new contract may be made; but while that contract lasts, I think the tenant should be obliged to fulfil his part of it.

3036. Do you not think it fair that the landlord should pay part of the expense?—I look upon it in settling his rate of rent, that there is an allowance made on that score, as well as other charges.

3037. There may be ample allowance made for roads already in existence, and it would probably be fair the tenant should pay for the repairs of the road he is to benefit by; the question put is, when there is a new road made, and the value of the estate permanently increased, do you not think the landlord should bear that expenditure?—A portion of it, of course; if the road is of any use, the tenant must derive benefit as well as the landlord; I think it would be easy to settle the proportions.

Mr. *Michael Malley*, called in; and Examined.

3038. YOU are, I believe, a director of the Dublin Royal Canal Company?—I am.

3039. Have you resided some time in Dublin?—All my life.

3040. Have you any knowledge of the inland navigation of Ireland, comprehending the canal and the River Shannon?—I have.

3041. Have you travelled over the line of country in which the Royal Canal runs?—Yes, and the Shannon; I have gone round from Kerry-head to Lough Allen. I consider the improvement of the Shannon would be a matter of great utility to Ireland, and of the greatest moment.

3042. At whose expense ought the River Shannon to be improved?—I think it ought to be at the public expense, and the reason is, because it would go to such an extent, and the management of it ought to be confided to the Board of Works, as appointed by Government.

3043. Do you think it desirable to get rid of the present local bodies, the Royal Canal, the Limerick Navigation, &c.?—I think so; I have always remarked when they are subdivided into companies, that it leads to a great deal of jobbing; I consider that this system has been very injurious to Ireland; I know it.

3044. Do you consider the extension of the Royal Canal would be a benefit to Dublin?—I think the Royal Canal is extended as far as it ought to be at present; it goes to Tarmonbarry, which was the original intention, and I think it ought not to go further, because when it goes into the Shannon, then it becomes a national undertaking.

3045. How far would you carry that canal from the Shannon?—For the present, I would carry the new line of the canal from the Shannon to Elphin; I am afraid it would cost a great deal of money to go further.

3046. If you had money, how far would you go?—I would go to Lough Gar, because it brings it near to the county of Mayo, and which would bring a great deal of corn down the country.

3047. What is the distance from the Shannon to Lough Gar?—I believe about 17 or 18 miles; I went from curiosity through the country, and I am convinced that nothing would tend so much to facilitate the improvement.

3048. If the Royal Canal was constructed again, might it not be done at a much less expense?—Certainly, some hundreds of thousands of pounds; they took the high ground when they might have selected a line of low ground; they went through two very extensive quarries; one quarry, I think, cost them nearly 100,000*l.*, and there was another near Mullingar; they ought to have kept the canal more to the north, and led it near Trim; but it is of no use now to mention it, as the injury has been done.

3049. Would the Royal Canal make this extension, if they were assisted by Government from the Shannon to Lough Gar?—I had much rather the Government would take the charge upon themselves, though I am a director; I would say that it invariably leads to private jobbing.

3050. Do you consider if the system was introduced of Government contributing one-third, and the proprietors of the stock or the proprietors of the land through which it runs, contributing another third, and putting one-third on for tolls, that a system of that kind to extend internal navigation would be highly advantageous?—I think it would be highly advantageous; I think it would tend to restore confidence among the lower orders of the people, for their wants would be attended to,

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and it would be highly beneficial in every point of view, both to the landlord and the tenant.

3051. Would you in that case recommend the Royal Canal to make the extension you talk of?—I would not recommend the Royal Canal to have any thing to say to it.

3052. The original stock, if I understand it, of the Royal Canal, is at this moment cancelled?—Yes.

3053. And the grant from Government was expended, and the capital consists of a further sum of 750,000*l.* that was raised?—The sum that the old company had raised by way of loan; the loan was converted into stock, and the stock proprietors have had their stock cancelled.

3054. How much was that loan?—About 780,000*l.*

3055. That, I believe, at present pays but a dividend of two per cent.?—Not so much; but 1¾ the last half-year and 1½ the half-year before; it did for several years pay two per cent.

3056. The profits of the Royal Canal are, according to the reports I have seen, about 120*l.* a mile?—I cannot exactly say what it is.

3057. How do you account that the profits of the Grand Canal are more than double per mile the profits of the Royal Canal?—Because the traffic is more extensive, and Mr. Williams, who is in this room, has increased the profits of that canal very considerably.

3058. If the navigation of the Shannon was opened, do you not think that the traffic of the Royal Canal would be very considerably increased?—Yes.

3059. Do you not think that the produce of the counties of Roscommon and Mayo, that are now brought to sea by land carriage of upwards of 40 miles, would get to the Liverpool and Manchester market by the Royal Canal?—Certainly, and agriculture would be increased very much in the counties of Leitrim, Roscommon and Mayo.

3060. Can you state the amount of the tolls paid by the Dublin Steam Packet Company to the Grand Canal?—I understand they are 9,000*l.* a year.

3061. Can you state the amount paid to the Royal Canal?—I cannot.

3062. Have you any further suggestions to make to the Committee?—The state of the road from Longford to Roscommon is in a very wretched state, and has been so for years. It would be desirable I think that the Board of Works should have the power where public roads have been in a state of dilapidation for a long time of improving them, and charging the expense to the counties through which they pass.

Mr. *William Bald*, called in; and Examined.

Mr. *William Bald.*

3063. WHAT is the reason for your preferring the harbour of Blacksod to the harbour of Galway, for the railroad you mentioned on your last examination?—The only reason, that it was more seaward than the bay of Galway, and the country all the way from Dublin to Clew Bay, and on to the harbours of Blacksod and Broadhaven, level and suitable to the construction of a railroad; but the line to Galway is equally level, and very much shorter than the one either to Clew Bay or the one to the harbours of Blacksod and Broadhaven. This main line of railway in this direction would cross the Shannon river, which requires so much to be improved, and would lay open the whole of the bog land lying in the middle region of Ireland, and which consists of about nearly three millions of acres; according to "Dr. Beaufort, the most extensive levels are about the middle of Ireland, where a vast plain stretches quite across, from sea to sea, from the coast of Dublin to the Bay of Galway, including in its extent the Bog of Allen." I further think where such a great work, assuming a national character, is likely at some period to be carried into execution through Ireland, from sea to sea, that a very careful examination of the country should be made in various directions, and also of the harbours on the western coast; for although some of these harbours may be objectionable, on account of their great extent and capacity, yet it ought to be considered how very easy it may be to construct works within, and render them perfectly safe and eligible to all the purposes which may be required to the security and safety of shipping. The more the capabilities of the country are investigated into for this project, and also the important public works which may be connected with it, such as supplying Dublin with cheap turf-fuel in abundance; the drainage of the Bogs of Allen; also the circumstance of cutting Ireland across in the very centre, and in the shortest and most level direction, where a railroad could be made at a very reasonable expense, are

matters

matters which require to be considered, and the more this is done the more likelihood there will be of selecting the best line for all the purposes of general public utility.

3064. Would not steam packets, established in the Bay of Galway, always enable vessels wishing to leave that port to go into the Atlantic?—The only difficulty that steam packets would have to encounter in that case, would be the prevailing westerly and southerly gales, in getting into the Atlantic free of danger. In the other case the harbours of Broadhaven and Blacksod being, as I before mentioned, more seaward, the steamers would get out at once into the open sea.

3065. Are you acquainted with any districts in Ireland of a mountainous character, which would be beneficially reclaimed and opened by roads?—Yes; I know many districts in Ireland to which very great benefit would arise from opening them by roads. For example, the mountainous districts in the county of Antrim, opposite Scotland, a portion of Sligo and the very extensive districts of Erris and Murrisk, in Mayo; also those in Connemara in the county of Galway. The mountainous districts, particularly of the West and South of Ireland, in the counties of Kerry and Cork, require roads very much; also the mountainous districts of Donegal. All these tracts of country resemble the Highlands of Scotland, and require much aid and assistance in making roads through them, because the population are extremely poor indeed. I am not aware of any description of works which tend so much to the improvement of Ireland as roads. All those districts now mentioned are capable of being improved to a very great extent, and nothing promotes this more than works of this kind.

3066. At whose expense would you suggest that these roads should be made?—I should think the system adopted in opening the Highland districts of Scotland should, in all cases, be followed, namely, that Government should pay one-half of the estimated expense, and the counties through which the roads would run, the other half.

3067. Would you assess the county or barony or district in which the roads are situated?—One half the expense of making the roads to be charged on the barony, and the other half of the expense of constructing the bridges and the masonry to the county, the Government contributing half of the whole expense.

3068. At what expense might these mountainous districts be reclaimed?—I have already mentioned that I have estimated the expense of draining 200,000 acres of bog at about 1 *l.* British per English acre. I should think, however, in the mountainous districts of Ireland where the bog is not deep they might be drained at less than one-half of this expense.

3069. Are you acquainted with the county of Mayo?—Yes.

3070. Can you state where small harbours would be useful for fishing purposes?—Yes.

3071. Be so good as to state them?—At Bunatrahur; Belderig; Port Thurlin; Fort-a-Cloy; Rin Roe; Inver; Portnafrankagh; Elly Harbour; Inishkea; Tulloghan; Doogort; Keem; Gubellaananbeg; Dooega; Trabodarig; Doobeg; Portachuila; Breakwater at Clare Island; Carrowmore; Runa; Inishturk; Inishtegil; Quay in Bofin; and Pier at the east end, and a Pier in Shark or landing-place made, and a Pier at Dooninver, near the Bull's Mouth. I drew out a design and plan for the Marquis of Sligo, the present governor of Jamaica, by which the harbour of Westport could be deepened nearly four feet, and which would be an extremely useful improvement to the whole trade of that country; Westport Harbour at present admits ships drawing 12 feet of water at spring-tides. The outward harbour of Westport is at Doreinch within the bar, and is about five miles seaward in Clew Bay. The bar which forms this harbour is a natural breakwater of one mile and a half in length, on which is situated the Isles of Doreinch More and Doreinch Beg; this natural breakwater slopes seaward in some places one in thirty; but inside facing the harbour its maximum slope is one to one: it is formed of boulders. This breakwater is perhaps one of the most remarkable natural hydraulic works that perhaps exists on the coast of Europe, and is well worthy of the attentive study of professional men who may be engaged in the construction of harbour works; its mass may be judged of from its sectional area according to its depth, being greater than that of the breakwater of Plymouth, or even that of Cherbourg in France. To form such a work would have cost more than two millions of money; it has a depth at its entrance of five and six fathoms, and although not near so deep within, yet, as the bottom is all mud, it could be deepened to any depth required. Immediately opposite to the harbour of Doreinch lies the harbour of Inish-Gort, within which there is at low

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water from four to six fathoms. This beautiful basin is more than a mile long and more than half a mile broad; the entrance to it is through the Channel between the Isles of Inish-Gort and Cullinbeg, which at low water has a depth of only 15 feet, but at high water springs 27 feet; this entrance might be deepened, if thought necessary, because the bottom consists of shingle, easily lifted with the steam dredge. Inwards lies the harbour of Inish Lyre, and northwards, bordering the Newport Channel, is situated the harbour of Inish Goula, safe and secure to all classes of ships, and having five fathoms of depth at low water. Here are a series of excellent harbours that would have cost millions to form, capable of holding the largest description of ships. I surveyed, navigated, sounded and made charts of these harbours along with many others on that coast more than 15 years ago. These harbours and Clew Bay claim attention in any communication being made with America, because a straight line drawn on an arc of the sphere from Liverpool to St. John's, in America, passes through them.

It may be interesting as well as useful to mention that all the limestone boulders on the shores of Clew Bay, and also all those on the sea coast round Ireland, are in a state of decay from the ravages of the Pholas; therefore breakwaters or harbours in deep water should not be constructed, if possible, with limestone, or any calcareous rock liable to be destroyed by the Pholas. Granite is exempt from the ravages of this animal. In the Frith of Forth, in Scotland, beds of rock 15 feet thick have been decomposed and destroyed by the Pholas.

3072. Are there considerable fishing banks on the coast of Ireland?—There are.

3073. Be so good as to state them?—There is a very large bank about 60 miles west from Achil Head, where boats from all parts of the west coast used to go searching for the sun-fish or basking shark. This great bank runs parallel to the coast of Ireland. It is, however, broken in several places. It runs southward by Shark Island, and towards the south coast of Ireland, and upon this bank are great quantities of cod and ling. It has been said that the Dutch in former times fished upon this bank with considerable success. Articles of Dutch manufacture have been frequently found in the peninsula, called the Mullet, near the harbours of Blacksod and Broadhaven, in Mayo. In 1603, the Dutch alone sold 1,759,000*l.* worth of fish. In 1615 they sent out 2,000 busses, and employed 37,000 men. In 1618, they sent out 3,000 busses with 50,000 men, and 9,000 vessels to transport and sell the fish, which by sea and land employed 150,000 men. I have seen charts of the western parts of Scotland, the Western Isles or Hebrides, and the western coast of Ireland, in Cowan the map-seller's shop at Amsterdam, near the Stadt House, on which charts were represented busses fishing on these shores, and describing the kinds of fish found. In 1680, when Amsterdam was at its zenith in commerce, the Dutch employed alone in the whale fishery 260 ships and 14,000 sailors; that branch of fishing has now fallen almost entirely into the hands of the British.

3074. Are the fishermen of the western coast enabled to reach the bank now?—No, they have not vessels fit to stand the sea on the bank, except in fine weather, neither have they fishing tackle, nor skill to carry on this deep-sea fishery to any profitable extent.

3075. Who fishes upon the bank?—Very rarely any one fishes upon it, because the boats upon the western coast of Ireland are too small, nor have the people fishing-lines suitable to carry on a deep-sea fishery with any success. The only vessels that I have seen upon that coast were in 1822, when there were about 20 sail, principally from the Skerries and Rush, situated on the eastern coast of Ireland; and those vessels, to the best of my recollection, carried about 35 tons of fish, and were manned by five or six seamen. At that period they were fishing upon the ground outside the Black Rock, and returned into the harbour (of Blacksod) every Saturday night. The fish were then landed, cleaned and salted, and packed in squares on the beach, and this was in the months of May and June; one man always remained ashore to cure and take charge of the fish; and when they had got their cargoes completed, which consisted of cod and ling, they informed me that they sold them in the market of Liverpool. These men fish round Ireland, and also upon the banks which lie off the coast of Bofin, which is situated on the coast of Galway (for there are more banks than one), but which island belongs to the county of Mayo, and in which is a tolerably good harbour. The best fishing ground for cod and ling is said to be between the coast of Ireland and Barra Head, the southern promontory of the Long Island on the west of Scotland; but there can be no question that during the summer months, with good vessels

vessels and proper fishing tackle, the deep-sea fishery on the west coast of Ireland would become a source of national wealth and strength. Franklin has said, "He that puts seed into the ground reaps forty-fold, but he that puts a line into the sea and pulls out a fish, pulls out a piece of silver." Fisheries are nurseries for seamen, and it ought to be recollected that at this moment the French have more than 25,000 men fishing on the coasts of Newfoundland and Labrador. By the last treaty of peace, Britain assigned to them the islands of Miquelon and St. Pierre, which has given them stations on the best fishing grounds of the British Colonies, and the United States of America have now more than 30,000 men fishing at Newfoundland. England ought, therefore, to extend this branch of national industry and wealth, by every means and by every encouragement in her power, because "*Le tridant du Neptune est le sceptre du monde.*"

3076. Are there any particular situations upon the Mayo and Galway coast which you would recommend for fishery stations or for small piers?—I have answered that already for Mayo; but beg to mention the following for the coast of Galway: in Connemara, at Killeen on the west side of Costelo Bay, at Ternee, west side of Great Man's Bay, at Rustreen in Kilkeran Bay, at Ard Castle in Ard Bay; to clear the pass of Stradle; this would only cost about 40*l.*, and would then be fitted for ships of 200 tons to pass through, and do away with the necessity of going round Macdara Island, which is attended with much difficulty and delay; to complete the north pier at Roundstone, one at Bunowen Bay, one at Ballinakill; to finish the quay of Clifden; one at Tully, near the entrance of the Killery Harbour. One of the most important things that could be done to benefit the people of this coast would be the clearing the pass of Ballydangan, at the head of Great Man's Bay; much life and property is lost there annually; and to widen the channel to the new pier at Killany in the island of Arran.

3077. Is there not a great want of asylum piers on the western coast of Ireland?—Extremely so for fishing purposes.

3078. And also for large vessels to run into for safety?—Yes, in many places.

3079. Where do you think it would be most advisable to build those harbours?—I have always thought that rather large harbours at Inishturk Island, also at Clare Island, would be most useful and beneficial; and at Inishkea Island, off Blacksod, would be an excellent place for an asylum harbour. I am not just now prepared to say, but that a most excellent seaward harbour might be constructed at the Iniskea Isles, in four and six fathoms water, capable of holding the largest class of ships, and might indeed perhaps become the most seaward and nearest harbour to St. John's in America, if a communication should be thought of in that line. An asylum harbour is wanting on the coast of the county of Clare.

3080. Is not the west coast of Ireland very extensive?—Yes; taking the sea line from Cork to Londonderry. The western coast of Ireland contains a greater extent of shore than the whole empire of France, being about 5,000 miles. To illustrate this I shall just state one fact; the distance between Westport and Newport in Mayo is only about 5¾ miles in a chord line, and the configuration of coast upon that chord line amounts to 55 English miles.

3081. In the whole line of 5,000 miles of coast, are there any asylum harbours?—To my knowledge there is no artificial asylum harbour of any magnitude, although there are very many excellent natural harbours.

3082. Do not the insurers in England suffer considerable loss for want of such asylum harbours?—I should imagine that the rate of insurance would be reduced if more security were given to the ships which trade and pass along the coast; as for example, between Belfast and Londonderry there is no harbour, with the exception of the very small harbour of Port Rush, in a distance of nearly ninety miles; and along which the greatest portion of the floating wealth of the river Clyde in Scotland, and a considerable portion of the floating wealth of Liverpool, and of the British Colonies in America, pass along that part of the coast of Ireland; and it would therefore be extremely desirable that an asylum harbour should be erected somewhere in the vicinity of Cushendun, between Larne and Port Rush. Larne harbour is a very good natural harbour, when once in, but cannot be approached in the night time; and even the harbour of Port Rush requires additional work and improvement. The asylum harbour proposed in the neighbourhood of Cushendun, on the north coast of Ireland, would require to be of considerable magnitude, placed seaward in deep water, and fit to receive ships of the largest class at all times of tide; it should rather be of the character of a breakwater, affording every facility of entering and departing at all times of tide and with every wind; this asylum

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harbour would be of great utility to the shipping interests of the Clyde, Liverpool and the States of North America, trading with Britain, &c. &c. There is another asylum harbour much wanting upon the coast of Ireland; I mean on the east coast at the Skerries. There is a letter which I have received from Mr. John Young, the resident engineer of the harbour works of Drogheda, which he sent to me in April last, in which he states, "On the 6th instant, it being the dead of neap-tides, the wind came round to the westward, and a large fleet of vessels drawing as much as 10 feet 6 inches of water sailed from the quay, and cleared out of the river the same tide; such a sight was never before witnessed in this river. The harbour is also much improved; vessels may now be seen discharging and taking in cargoes close up to the bridge of Drogheda." And in a letter dated the 10th of January 1835, Mr. Young, the resident engineer of Drogheda harbour, says, "I have been credibly informed that four vessels, one of them a regular trader to this port, was driven ashore at the Skerries, on the night of the 31st December last. I mentioned this to Messrs. Smith and Smyth, and they requested me to state this to you as a striking proof of the necessity of having an asylum harbour at the Skerries and a light-house on the rock of the Bill." To beacon with round towers the dangerous reefs and sunken rocks on parts of the coasts of Ireland, would tend much to the safety of the navigator and the trading vessels of Great Britain and Ireland.

3083. Do you think timber for ship-building for naval purposes could be grown in the valleys and on the lands which surround the harbours of the western and southern coast of Ireland?—I think there are considerable tracts, well sheltered in valleys, lying adjacent to the harbours on the southern and western coast of Ireland, which perhaps might be beneficially planted with oaks, larch and Scotch firs, and which might very possibly become fit for the purposes of ship-building. The climate of the south-west of Ireland is remarkably mild, and vegetation is hardly ever arrested by frosts, similar to those which happen in England and France. There is a humidity and a mildness in the climate peculiarly favourable to the growth of all kinds of timber in those southern and western districts of Ireland; and the contiguity of the harbours on that coast would afford every facility to its transport to any part of the empire it might be required. I have been informed that between the years 1815 and 1826, 40,000 acres have been planted in England with oaks and Scotch firs, the firs to shelter the oaks.

3084. Have you examined any part of the River Shannon?—Yes, I have.

3085. Can you suggest any improvement?—I was lately boring the bed of the Shannon at Portumna, by order of the Commissioners of Public Works in Ireland, for the purpose of erecting a bridge over that river, and it appeared to me it would be extremely desirable to improve that magnificent river navigation generally, and that it should be done, I think, entirely by Government, so as to make it perfectly navigable throughout the whole of its extent. There are considerable portions of the lands adjacent to the Shannon river which are subject to flood in winter, and which I shall call the water or winter basin of that river, the extent of which I should think it would be most desirable to know; also the flooded basins of the Suck, the Brusna, the Inny, &c. &c.; a correct and distinct survey of each of them, showing the area, value and nature of the ground covered by water in winter in each of those respective flooded basins, accompanied by tranverse sections, taken at every mile in length, exhibiting the breadth or width of the flooded country, and the depth of the water in winter, and the depth of the marl beds by boring; also the velocity of each river in every half mile of its length, in winter and in summer, would be documents of very great interest and value, in order to arrive at a correct conclusion what improvements should be contemplated and decided on regarding the flooded lands. There has been a constant cry to lower the waters of the Shannon to the summer level, but if that was done, what would be the extent of the country improved by doing so, and the expense? What is the present value and the extent of the flooded land in the vale of the Shannon, of the Suck, Brusna, Inny, &c.? What would be the probable future value of the same land, if the winter waters of the Shannon, &c. were reduced to their summer level, and the lands no longer subject to annual inundations? Would the meadows and bottoms and other lands along the vale of the Shannon and its auxiliary branches be more fertile and productive, by not being subject to these annual floodings or natural inundations? Does a command of water give to man a power to produce fertility, &c. &c.; and if it does, would a higher level of the Shannon during winter, *i. e.* a more extensive natural irrigation, under proper and full command of its waters, be more beneficial in producing

producing fertility or otherwise, than a reduction of its waters to a lower level than the present one? are questions which I should imagine require the aid of exact science, calm and deliberate inquiry, and much deep investigation.

3086. Would it not be fair that a portion of the expense of this should be charged upon those lands which would be so much benefited by the reduction of the Shannon to its summer level?—Unquestionably, if the lands be made more valuable.

3087. What is the velocity of the Shannon River?—The velocity of the Shannon at Portumna Bridge, taken in the centre on a section six feet deep, was as follows:—One foot in 2.39 seconds, centre of river under Wooden Bridge, Munster side; one foot in 2.75 seconds, centre of river under Wooden Bridge, Connaught side; one foot in 2.75 seconds in centre of open river above Hays Island; one foot in 1.64 seconds in centre of open river below Hays Island. Sectional area of the River Shannon above Hays Island, 9,384 feet, summer level. Sectional area of the Shannon below Hays Island, 9,036 feet, summer level. These observations were taken on the 26th of May, 27th of May, and 28th May, 1835. Dr. Gregory states, that the "Areas of the Transverse Sections, in the River Thames, at London Bridge: At an extraordinary high water or level of two feet above the average spring-tide high-water mark, at the Hermitage entrance to the London Docks, as settled by the Corporation of the Trinity House, August 1800, 8,130 feet; at the Trinity high-water mark or Datum, 7,360." The catchment basin of the Shannon above Portumna Bridge contains an area of about 2,600 square miles, and the area of the catchment basin of the Shannon about Killaloe may, perhaps, be called 3,500 square miles; this is taken approximatively from Arrowsmith's Map of Ireland. If 18 inches be taken as something more than the third part of the annual quantity of water which falls within this basin in rain, snow and dew, and that this depth of 18 inches all over the basin passes annually to the sea through the Shannon, immediately below Lough Derg, and the other two parts nearly go off by evaporation, then we shall have with a fall of 90 feet $5280 \times 5280 \times 1\frac{1}{2} = 41817600 \times 3500 = 146361600000$, $\frac{146361600000}{525600} = 278465$ cubic feet in a minute; $278465 \times 62\frac{1}{2} \times 90 = 156636558o$, momentum $\frac{156636558o}{44000} = 35599$ horse power of the Shannon. But if Lough Derg was under sluice and dam, and working 12 hours per day, it would be equivalent to 1,424 steam engines, each fifty horse power. It would be most useful, for many practical purposes, that the survey of Ireland should specify distinctly the area of each river basin. This has been done in many of the late continental surveys, and if the levels were given we should then be in possession of the elements to measure the extent of the water power possessed by Ireland.

3088. Can you suggest any improvements to be made respecting the navigation of the river Shannon?—I should think the river Shannon should be made perfectly navigable from Limerick to Lough Allen, but I am not sufficiently acquainted with all the minute details of the river to specify the particulars; but in descending the Shannon the other day from Shannon Harbour to Portumna and back, I passed through part of an extremely intricate and crooked navigation. I have also been up at Tarmon Barry, down at Killaloe, Limerick, and at Kilrush, and I am of opinion that the Shannon River navigation requires to be improved throughout the whole of its extent, and is in fact a national object of very great interest to Ireland as well as to England.

3089. At whose expense ought such improvements to be made, in your opinion?—My opinion is, that the Government of the country should be at the entire expense for the improvements of the Shannon, being an immense river, passing through a great portion of Ireland, indeed through its very centre, and giving a facility to the manufactures of Great Britain to enter into that country, and also giving facilities to the transport of the agricultural produce out. It is really a great national work, and on that account ought to be done at the national expense.

3090. Do you not think it reasonable that the landed proprietors on both sides of the river Shannon should contribute a portion of the expense?—I consider the improvement of the navigation as a separate and distinct operation, from that which is to be the improvement of the land, and I would keep them separate; and where the lands of proprietors would receive improvement and benefit they ought to pay a proportion of the expense of effecting the improvement.

3091. What do you mean by the proprietors receiving benefit?—If by any arranged plan the property of a proprietor would be improved either by the irriga-

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tion or drainage of his land, and he would get or obtain an increase of rent by his land being made more valuable, I consider he ought in that case, or the land, to bear a proportion of the expense of effecting that improvement.

3092. Do you consider there would be any difficulty in ascertaining the sum properly chargeable in respect of such improvement upon the landed proprietor?—I should think not.

3093. Then you would not make it an equal tax on all the lands adjoining the Shannon?—In proportion to the improvement effected, so should the land bear its proportion of the expense.

3094. Are you acquainted with the tributaries that fall into the river Shannon?—Yes; I have seen the Suck in the summer, and also in the winter when covered with water, and also the Brusna and the Inny rivers.

3095. Are those rivers capable of being rendered navigable to any and what extent?—I apprehend those rivers, particularly the Suck, can be made navigable for many miles into the interior of the country, as it is extremely level.

3096. Are you not aware that there is a very great tract of land on the side of the Suck, which is entirely rendered useless by the overflow of the water?—There is a considerable portion of the land to my knowledge on both banks of the Suck, subject to annual inundations, which frequently injure and destroy the crops of hay, &c.

3097. Would not such land be greatly benefited by improving the navigation of the river?—There can be no question but there might be a plan combining the improvement of the land and also the navigation. No country can present so noble a field to display the talent, resources and ingenuity of a hydraulic engineer; indeed most beneficial and splendid improvements could be effected along the Shannon, the Suck, Brusna, Inny, &c. &c. The command of water that offers, and the extent of country capable of improvement to a high extent, are such, that nothing like it can be found within the British territory.

3098. At whose expense would you propose that the improvement of the navigation of the tributary rivers should be made?—I am decidedly of opinion that it should be at the expense of Government.

3099. Are there not great tracts of land both on the River Suck and the neighbouring rivers that might be capable of being reclaimed?—Thousands of acres of land capable of improvement.

3100. Are you acquainted with an Act passed in 1831, for improvement in the embankment and deepening of the rivers; Mr. O'Ferrall's Act?—I have seen it, and I think I have a copy of it, but I am not particularly acquainted with Mr. O'Ferrall's Act; at least I do not recollect the particulars of it; I have heard of no extensive improvements being made under it.

3101. Are you of opinion that similar powers might be beneficially conferred on the Board of Works?—I cannot take upon myself to say.

3102. Do you know of any tract of land on the coast of Ireland that might be taken in from the sea?—Yes, I know several tracts.

3103. Can you state them?—In Belfast Bay, in the bay of Larne, coast of Londonderry, on the coast of Mayo, and even a portion of the bay of Dublin, coast of Galway, Clare, Limerick, &c. &c.

3104. Can you state in particular any of those portions?—I cannot at this present moment state the exact extent of any particular part, but I have frequently seen them in the course of my professional pursuits, and wondered they were not embanked in. Indeed, I never pass them without thinking of Holland, because in my opinion the Dutch would not be in possession of such tracts of land six months without embanking large portions of them in.

3105. Would it not be attended with considerable expense?—There is no question but it would in some cases; but nevertheless it would be extremely remunerative.

3106. But the expense is not so great as to prevent a very beneficial return?—No doubt, generally, a very beneficial return. It would be a valuable inquiry, to examine into the extent and practicability of embanking and reclaiming the marine lands which are to be found on the coast of Ireland; those tracts of land subject to be covered by the tide at high water, but dry at low water, are in many instances situated in very sheltered places, and consist frequently of the richest calcareous depositions, because they have been time immemorial the abode of innumerable generations of marine animals, whose exuviæ now form such valuable beds of matter so well suited to agricultural purposes. I should think these lands round Ireland cannot be less in extent than 200,000 acres; but this I merely say in the absence of exact data.

data. I have heard it mentioned that the people of Holland at one time proposed to embank in the greater part of Lough Foyle in the county of Londonderry, if they would be permitted to erect a free town, along with certain privileges or rights to fish on the coast of Ireland. That enlightened, talented and gifted gentleman, Mr. Leader, the late Member for Kilkenny, is aware of this curious circumstance.

3107. Do you know how those works are carried on in Holland; at whose expense?—Large tracts of land covered with water, have from time to time been taken in by the Government of that country, and at its expense, and under the superintendence of the engineers of the Water Staat; those tracts recovered have been sold in some cases, and they did not bring in as much as would pay all the expenses; but the annual tax existing on the recovered land fully indemnified the Government. The late Alexander Nimmo, in his evidence, has given an account of one polder drained; and I now beg to mention, that at this very moment, there are several hundred men now employed in the island of the Texel, embanking in from the sea a large extent of marine ground; it contains an area of 3,000 bunders. The sea dyke, which is to keep out the waters of the ocean, will be six miles long, and is now executing with all the skill and talent which so pre-eminently distinguish the Dutch engineers in this species of hydraulic work. This embankment is considered to be one of the largest of the kind, as well as one of the most interesting that has been undertaken in Holland for the last century. It is a company that is carrying on this work, and they have purchased from the Government of Holland whatever interest it had in this large tract of sea land on the shores of the Texel island. There is also some plan about being adopted for draining Haarlemmer-Meer, an inland sheet of water, containing about 60,000 acres. In attempting the drainage of so large a lake, the Dutch have frequently thought there might be danger of the sea bursting in through the sandy ground, as the bottom of Haarlemmer-Meer is below the level of the ocean. They no doubt remember with pain the melancholy catastrophe which happened at Moordyke above Dort in 1420, when seventy villages were overwhelmed and entombed by the ocean; forty of these villages were recovered, but thirty of them still remain under its dominion. The Government have been thinking of embanking in a large portion of this lost land, as it has risen considerably in some parts. The whole works of Holland, the canals, roads, embankments, basins and drainage have cost nearly 400 millions of money, and cost annually 1,200,000*l.* to keep them in repair. Those works are all under the administration of the Water Staat and their chief engineer, with assistants. Holland is unequalled by any country in Europe for its singular situation; having been embanked or dammed in from the waters of the German Ocean, it offers to the contemplation of the hydraulic engineer a subject of the deepest interest. The simplicity and economy of the construction of their wooden piers, bridges of brick, sluices, flood-gates and bascule bridges, a species of engineering works with us of the most expensive and costly kind, forms a very striking contrast. It has however been said that a dock fit for ships of war could not be constructed in Holland for less than 100,000*l.*, stone being so expensive; the white free stone in the Staat House at Amsterdam was taken from Fifeshire in Scotland. The windmills may be called the steam engines of Holland; there are nearly two hundred of them in the province of Delftland, which is about 50 to 60 miles long, to drain in the spring all the flooded plains; these mills go by wind, and raise four feet high 700 hogsheads or casks of water per minute; each cask contains about 5¼ cubic feet du Rhin. The windmills not only drain the country, but grind corn, crush rape for oil, and a very great number saw wood, and even some prepare snuff. What the extent of the windmill power possessed by the Dutch is I cannot say, but it must be very considerable. I have mentioned this in order to show that there exists a cheap power capable of keeping dry any lands that might not be level-free in Ireland, and particularly those tracts situated on the coast, should they require it. Amsterdam contains a population of about 180,000 inhabitants, Dublin 250,000 inhabitants; Holland contains a population of 2,758,632, Ireland a population of nearly 8,000,000; the extent of Holland is 6,400,000 acres; Ireland contains an area of 20,000,000 of acres; Amsterdam possesses a ship canal 50½ miles long, more than 120 feet wide, and more than 20 feet deep. This canal is capable of floating into the very town of Amsterdam, from the deep sea at the Helder, the largest class of vessels, while the large and populous city of Dublin has no such advantage to carry on a foreign trade. The extent of Ireland, the size of Dublin, the quays of the Liffey the finest and most extensive in Europe, the position of the Custom House and docks, all proclaim that there should be a canal from the deep water into the city of Dublin, capable of floating up the largest

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class of foreign vessels. In point of population, in point of territory, the capital of Ireland requires a ship canal even more than the capital of Holland.* Just glance at the position of Ireland in the Atlantic, facing with her southern and western shores the coasts of France, Spain, Portugal, the West Indies and the gigantic infant republics of the American continent; on the north opening to the whole wealth of the northern and western fisheries; while her eastern shore, since the invention of steam navigation, may be said to touch the greatest commercial and manufacturing nation in the world; yet her capital, Dublin, cannot be approached by any class of vessels engaged in foreign trade, for the want of a ship canal of a very few miles in length, and which is quite practicable to be executed with facility. The Amsterdam Canal is the largest in the world; its sectional area is greater than the Caledonian Canal, and twelve times larger than the great western American Erie Canal, and six times larger than the Languedoc Canal, which has conferred so much benefit on the south of France, and which was projected by that enlightened statesman Colbert, to whom France is indebted for the first rise of her navy, and the inimitable and yet unequalled style of marine architecture which has ever since his time characterized the naval department of that country. The expense of the Languedoc Canal was partly paid for by the province of Languedoc, and partly by the King of France, Louis the Fourteenth. The Dutch Canal of Amsterdam cost about 750,000*l.*; it was begun in 1819 and finished in 1825, at the expense of the Dutch Government. This canal has been of much public benefit to that country in admitting large ships readily from the deep water at the Helder up to the city of Amsterdam, and avoiding the navigation of the Zuyder-Zee, so beset with shoals throughout; besides, below Amsterdam, about seven or eight miles, is the Pampas, or bar of the Zuyder-Zee, which has only about eight feet of water. In or about the year 1668, when Amsterdam was the most commercial port on the west of Europe, the bar or Pampas of the Zuyder-Zee was so much felt that Barker, the burgomaster of that city, invented the Camel, a species of boxes, to enable ships to sail over this bar; but although the Camel lessened the ships' draught of water, and enabled them to pass, yet on the other hand the ships were strained and injured by its application; large ships were therefore obliged to unload part of their cargoes at the Pampas before they could enter the port of Amsterdam.

The Amsterdam canal is 50½ English miles long, and in Rhynland feet is 120 feet wide at water's surface, and 20 feet deep; but in English feet it is 123 feet 7 inches at water's surface, and 20 feet 7 inches deep. Like the canals of Holland in general, its level is that of the high tides of the ocean, and from which it is supplied with water; it required only two tide-locks, one at each end; there are 4 sluices and 18 draw-bridges; the locks and sluices are double. At the fine harbour of the Nieuwe Diep is a powerful steam engine to supply the canal with water during neap tides. The time generally taken to track vessels along this canal from the Helder to Amsterdam is about 18 hours. A ship canal has within a few years been cut across the island of Voorn, of about five miles in length, from Hellevoetsluys to the Maas, and is of immense service to Rotterdam, as ships can enter and also go to sea from the Maas through this canal at any time, and is now generally taken by vessels drawing from 16 to 17 feet of water, instead of the old and intricate channel round by the Briel. Thus the two chief cities of Holland can readily be reached by all classes of foreign trading vessels in consequence of having two ship canals.

The city of Glasgow, in consequence of the improvement of the River Clyde navigation by deepening, has so much increased in trade that the annual harbour dues of 147*l.* in 1770, is now more than 25,000*l.* a year, and the river has been deepened from 4 feet to 15 feet. I am not able to say just now what is the value of the moving force or power of the tidal and river waters to ships going up and down the estuaries of the Thames, the Clyde, the Liffey and the Boyne daily, but I think it would be worth investigating. The power of tidal rivers up and down must possess great advantages over still-water navigations, where horse-power must be employed. If steam-boats from the ports on the North coast of Ireland, for example, from Belfast, could navigate across from the Clyde to the Forth, the voyage to London would be shortened above 200 miles going, and returning 400 miles, and the dangerous and circuitous voyage round the Land's End altogether avoided. There are other immense advantages which this navigation would open up if once done on a large scale.

3108. Could you mention any towns where canals have been made, for the purpose of supplying them with fuel, where it has been afterwards necessary to construct

* That enlightened statesman the late Viceroy for Ireland, the Marquis Wellesley, fully appreciated all the national benefits that would arise from the execution of such a work.

struct a railroad for the same purpose?—Yes; the city of Glasgow many years ago had the Monkland and Ardrie Canal constructed for the purpose of supplying it with coal; and they have, within a few years past, constructed a railway, called the Garnkirk Railway, which is more than eight miles long, with branch lines to the collieries. It cost almost 80,000*l.*, and it now delivers into the city of Glasgow 136,556 tons of coal annually, besides stone and brick; it has reduced the price of coal in Glasgow to 6*s.* 6*d.* per ton, formerly about 9*s.* Coals cost for carriage on the railway for $8\frac{1}{4}$ miles the following prices:—6*d.* per ton for carriage of $8\frac{1}{4}$ miles; 3*d.* per ton for haulage for $8\frac{1}{4}$ miles; $1\frac{1}{2}$*d.* for use of waggons for carrying 1 ton for $8\frac{1}{4}$ miles; total, $10\frac{1}{2}$*d.* for carriage of 1 ton for $8\frac{1}{4}$ miles. Both railway and canal have plenty to do; Glasgow consumes annually about 600,000 tons of coals, but the quantity raised in the neighbourhood amounts to between 700,000 and 800,000 tons of coal. Darlington Railway, which is 25 miles long, can convey from Brusselton to Stockton, distance 25 miles, and deliver into the ships from 500 to 600 tons of coal weekly, carried at the rate of one penny per ton per mile. Coals formerly sold at Stockton at 18*s.* per ton are now selling for 8*s.* 6*d.* The city of Edinburgh paid as high as 18*s.* per ton for coal before the construction of the Union Canal, which runs from Glasgow to Edinburgh, and which cost 400,000*l.* One of the principal objects of that canal was to supply the city of Edinburgh with coals at a cheaper rate, and I think coals were reduced in price per ton from 18*s.* to 12*s.* 6*d.* The citizens of Edinburgh within a few years have constructed a railway, called the Dalkeith Railway, which extends from Edinburgh to the great coal basin at Dalkeith. That railway carries into Edinburgh about 130,000 tons of coals per annum, and is annually increasing; and they are now constructing a branch line to the town of Leith, to supply Leith also with coals by railway conveyance, for canals may be shut up by frosts in winter. Since the construction of the Dalkeith Railway, coal has experienced a further reduction from 12*s.* 6*d.* per ton to 10*s.* per ton, delivered at the houses. It therefore appears that the citizens of Dublin pay three times as much for coal fuel as the citizens of Glasgow, and nearly twice as much as the inhabitants of Edinburgh; 300,000 tons of coal are annually consumed in that city. Both the Union Canal and the Edinburgh and Dalkeith Railway have abundance to do in supplying Edinburgh with coal. The run of coal boats on the Union Canal at Edinburgh is about 25 miles, with no locks to pass. The Edinburgh and Dalkeith Railway is about 9 miles 420 yards long, and cost about 120,000*l.* Where there are so many thousand acres of bog lying within 30 and 40 miles of Dublin, with a level country descending from the bogs towards that city, extremely favourable to a trade in that direction, it appears to me, and has done so for some years, that it would be of the greatest public utility to endeavour to form some plan, by railway conveyance, to supply Dublin with turf-fuel in greater abundance, and at a cheaper rate. This would employ annually many thousand men, and keep immense sums of money in Ireland, to be expended among the labouring population; draining the bogs and preparing the turf-fuel to supply the Dublin market, and which now goes to England. Besides it would be the means of improving the great bog plains, converting them into excellent corn land, pasture and meadow; and it would also purify the atmosphere and improve the climate.

3109. Are you conversant with the present system of county engineers, and the new Grand Jury Act?—Yes.

3110. Be so good as to state any improvement that you are able to suggest?—I think it is quite wrong to give the county works, by contract, into the hands of the lowest bidder. I think the law in this case ought to be altered, because it throws the works into unskilful hands. I think it quite proper that extensive road and bridge works should be placed under experienced and skilful persons; but I am of opinion that the engineers placed in many of the larger counties in Ireland should have assistants, because it is almost impossible that one person alone could personally do all the duties which the law regulations now require; in many instances two and three assistants would be required. It would also, in my opinion, be a most desirable object to have a school of roads and bridges established in Dublin, for the purpose of imparting both theoretically and practically knowledge to young men, who would be desirous to become assistant engineers; the ancient and modern analysis to be carried to much extent, and to form the first class; and the examinations in those branches to be rigorous and exact, because the engineers' power of investigation will after be in proportion to the proficiency he may have made in those luminous and useful branches of science. The young men should be

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taught how to use the sextant, theodolite and spirit level, the modes of adjustment, and such an insight into their construction as should always enable them to work accurately without fear of errors arising from derangement; drawing of maps, designs for bridges, for locks for canals, harbours, sections, &c. &c. Lectures should be given on the laying-out of canals, harbours, roads, railways, &c. &c., and such other works as form the travaux of the civil engineer; knowledge both theoretically and practically to be fully and clearly imparted. The young men should also construct and make models of bridges, locks of canals, and such other engineering works as may be deemed interesting. Nothing will convey and fix knowledge so much, or make them remember more perfectly all the parts of a work, as modelling it; and for this purpose a few models should be procured, not only to model by, but to draw maps and designs from; and they should be deposited in the model-room of the school, in which should also be lodged from time to time, models of the most remarkable works which may be executed in Ireland or other countries. I beg leave to observe that all this is nearly in accordance with the Ecole des Ponts et Chaussées at Paris, and from which school have emanated the best educated and most scientific engineers which have yet appeared in Europe. Their writings on engineering are by much the most considerable and instructive that any nation has yet produced. The model-room of the Ecole des Ponts et Chaussées is, perhaps, one of the most interesting apartments that a man of practical science could enter; indeed, the whole arrangement of their mode of instruction may be fairly offered to other countries for imitation. The genius and talent of the learned men in France are recognized, sustained and esteemed by the people and government of that country; and the consequence is, that they hold the first rank among the nations of Europe in almost all the departments of science. The works published during the last fifty years have justly assigned to them this pre-eminence. I therefore do, in the strongest manner, recommend to the consideration of the Government the formation of a school to prepare young men for the duties of a civil engineer, and who are to be occupied with the execution of works which are to spread improvement and civilization through the land. I have already mentioned a model-room as being necessary to this establishment. I may also add the great advantage which would be derived in having a library containing every thing useful and practical that has been written on civil engineering. Ireland contains not less than

	ACRES.
	4,500,000 of bog requiring to be drained.
About	350,000 of large lakes.
Ditto	200,000 of land covered by the sea at high water.
Ditto	200,000 of flooded lands along rivers requiring improvement.
	5,250,000

All this combined with the improvement and formation of roads, canals, piers, harbours, railways, &c. &c. offers an immense field to the operations of the scientific and practical engineer. Although the formation of institutions and societies for learned purposes are very much to be admired and encouraged, yet on the other hand the establishment of a school for civil engineering claims particular attention; because no such thing yet exists in any part of the British dominions.

3111. Have you turned your attention to the drainage of any of the large lakes in Ireland?—Yes, I have.

3112. Do you conceive any considerable extent of ground could be restored by drainage?—I am of opinion that a reduction of the waters of lake Mask to the level of Lough Corrib would probably leave dry very nearly the whole of Lough Carra, containing 3,000 acres; and also I should think the greater part of Lough Mask, which contains about 21,000 acres.

3113. How much of Lake Mask?—I should think a very large portion of it. The bottom of Lough Carra consists of marl, and did not appear to me to be a deep lake; that of Lough Mask I should apprehend to be very deep towards the mountains on the Joyce Country side; their drainage would also leave dry the whole of the flooded basin of the Robe River many miles into the interior of the country; and it would, in my opinion, give an effectual fall to the waters of the interior districts, probably to an extent of not less than 200 square miles. The lowering of the water of Lough Mask to the level of Lough Corrib would give a drainage to more than 150,000 acres of an inland country; but if a full command of the water basins of Lough Mask and Lough Carra, containing 25,000 acres, having a fall of 36 feet, with a catchment basin above, embracing a surface of more than 500 square miles,

was attained, there would be a magnificent command of water for irrigating to an immense extent, or a water power of the following magnitude:

$5280^2 \times 1\frac{1}{2} = 41817600 \times 500 = 20908800000, \frac{20908800000}{525600} = 39780$ cubic feet in a minute.

$39780 \times 62\frac{1}{2} \times 36 = 89505000$, momentum fall 36 feet $\frac{89505000}{44000} = 2034$ horse power working 24 hours.

But under sluice and dam 4068 horse power, at 12 hours' working each day, or equal to 81 steam engines of 50 horse power each.

Loughs Conn and Cullin contain an area of 14,000 acres and are elevated above the sea 27 feet; these lakes by sluice and dam might be kept to their summer level, and without losing the power of being able to irrigate the whole of the low lands which surround their borders to even the highest winter level of their waters. Cutting through the rock which forms the fall at Foxford would give full command of the water basins of Lough Cullin and Lough Conn; the area of the catchment ground of the River Moy, Deel, &c. feeding these lakes, is not less than 900 square miles, and the water power is about as follows:

$5280^2 \times 1\frac{1}{2} = 41817600 \times 900 = 37635840000, \frac{37635840000}{52560} = 71605$ cubic feet in a minute.

$71605 \times 62\frac{1}{2} \times 27 = 120833424$, momentum fall 27 feet $\frac{120833424}{44000} = 2746$ horse power working 24 hours.

But working under sluice and dam 5492 horse power at 12 hours' each day, nearly equal to 110 steam engines of 50 horse power each.

In the Annuaire for 1835 are to be found some interesting results regarding the quantity of water discharged into the sea by the Seine river, as compared to the quantity of rain, dew, &c. falling annually within its catchment or feeding basin; the measurements of M. Dausse, Ingenieur des ponts et chaussées, establish facts at very great variance with those given by Perrault and Mariotte. I have just mentioned this, lest it may be thought the number I have taken for the depth may be considered too great. Many thousand acres of land might be recovered from Lough Neagh as well as from almost every large lake in Ireland. Indeed an investigation by actual survey of the extent of ground which might be recovered from the lakes in Ireland, would be a most important and useful inquiry.

Description of Blacksod and Broadhaven.

Blacksod Bay or Blacksod Harbour, on the West coast of Ireland, is from its entrance at Blacksod Point to the Bellmullet $10\frac{1}{2}$ miles long. The mouth of this harbour at Blacksod Point is $2\frac{1}{2}$ miles broad, and widens inside to a breadth of more than 6 miles. It may be taken at an average breadth of 3 miles for a length of 8 miles, which assigns to this spacious harbour an area of 24 square miles, or 15,360 acres. The depth of water at its entrance is 13 fathoms, and continues inwards to be 11, 7, 5, $4\frac{1}{2}$, and 4 fathoms deep. Vessels generally lie up at Elly harbour in $4\frac{1}{2}$ fathoms, and which is situated within Blacksod.

Broadhaven Harbour is situated within 600 feet of Blacksod. It is $6\frac{3}{4}$ miles long from Gubacashil Point at its entrance to Bellmullet. This harbour is three quarters of a mile wide at its entrance, and has a depth of 11 fathoms of water, and continues inwards to a distance of three miles to be 11, 4, 3, $4\frac{1}{2}$, 8, 7, 4, $2\frac{1}{2}$ and 2 fathoms deep. These two harbours of Blacksod and Broadhaven are only separated from each other by a very low boggy isthmus of only 200 yards across; consequently they could be easily united by cutting through this isthmus, and floating basins to any extent might be formed to receive ships of any class should it be found necessary; and there is an abundance of excellent granite to be had at Blacksod Point, admirably suited to engineering works of any kind. These two harbours of Blacksod and Broadhaven are completely covered, defended and protected from the Atlantic by the breakwater of the Mullet, which is 15 miles long. These combined harbours possess entrances both to the south and also to the north, affording perfect and full security of sailing out and in. Further, these harbours in south and south-westerly winds have no lee-shore northwards, such as all the harbours situated southwards, on the West coast of Ireland, really have. By referring to any good map of Ireland this will at once be clearly understood, and also the seaward position of Broadhaven and Blacksod into the Atlantic, points them out as being the most commanding harbours on the western shores of Ireland. Nature has pre-eminently distinguished

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and signalled these harbours, because Achil Head and the Saddle of Achil Head, forming the land on the south side of Blacksod, is, without exception, the most lofty headland on the west coast facing the Atlantic, being 2,254 feet high, and which can be seen seaward in the western ocean at a distance of 58 miles, as before mentioned. The value of this to the mariner can only be fully appreciated by those versed in nautical affairs.

I shall now refer to the charts and descriptions of these harbours and a few others, by Murdoch Mackenzie, a pupil of the celebrated Colin Maclaurin, Professor of Mathematics in the College of Edinburgh. Mackenzie was a man of science, and actually surveyed and navigated the whole shores of Ireland for the Admiralty; his charts are drawn with very great simplicity, and his nautical descriptions are clear and distinct. Mackenzie's charts of Blacksod and Broadhaven bear the date of 1768, and are remarkably good performances in hydrography, for that period; but I am very far from attempting to compare them with either the science, detail of execution or engraving, which so very pre-eminently distinguish those late hydrographic charts executed by the Depôt de la Marine of France, and which reflect the highest honour on the Government of that country for having published, and continuing to publish, such a numerous series of such cheap and accurate charts, so admirably suited to all the most useful purposes of maritime navigation.

MACKENZIE'S DESCRIPTION OF THE HARBOURS.

Blacksod Bay.

BLACKSOD BAY is pretty well sheltered, the ground clean in most parts, and the water sufficiently deep for large ships; but the ground being a hard sand, it is not thought that it will hold well in hard gales from the W. or S. W., especially in the winter time, when these winds set in a great swell.* The best anchorage is on the west side of the bay, about a quarter of a mile southward of Barnach Isle, on four-and-a-half or five fathoms, &c. &c.

Broadhaven Harbour.

In this harbour the proper anchorage is well sheltered, the ground good, and the water of a sufficient depth for any ship, &c. &c.

Bantry Bay.

Bantry Bay is a large, safe and commodious place for ships and vessels of all sizes. The stream of tide is scarce sensible in any part of it. The water is of sufficient depth almost close to the shore on both sides, and no rocks or shoals in the way going up but what may be easily avoided in the night-time. The best anchorage for large ships is at the east end of Whiddy Island, either on the north or south side of Horse Island, on from six to ten fathoms water, &c. &c.

Bearhaven Harbour.

Bearhaven is an extraordinary good harbour; large, well sheltered, sufficiently deep for the greatest ships, and the ground very good every where. There are two entries to this harbour, one along the west end of the island, the other along the east end; the west entry is most direct and readiest for vessels coming from the westward or southward; but the east entry is rather the safest for one that is a stranger. The anchorage is any where on the north side of Bear Island, from five to eleven fathoms water, &c. &c.

Kenmare River.

This river (more properly an arm of the sea) has deep water and clean ground in almost all parts of it that are above a quarter of a mile from the land, and nothing that any ship need be afraid of out of the bays, but Maiden Rock off Rossmore Island, and Roanharrick Rocks near Kepinacosh Islands. The best harbours in Kenmare are Sneem, Ardgrume, Kilmichaeloag and Danish Island.

Valentia Harbour.

This harbour is good ground, well sheltered and capable of the largest ships. The best entry to it is at the east end of Valentia Island, where the best anchorage also is. Anchor on the south side of Begginish Island, any where between it and the foot or eastmost point of Valentia, on five or six fathoms water, above a cable's length form the shore; or pass Foot Point and anchor off the House Ringlass on four fathoms.

In the east entry of Valentia there is a rock nearest the west side, about a quarter of a mile southward of the ruinous houses, called Cromwell's Fort, which dries at a quarter ebb, and is to be taken on the starboard-hand going in. You are on the north side of this rock half a cable's length when the south point of Begginish Island bears on the sharp-topped hill next eastward of Rinaard Point. You avoid it on the east side, when the tapering hill on the Great Blasket bears on the extremity of the Foot Point. Near the west-end of Begginish Island, over-against Cromwell's Fort, there are two small rocks, that lie a quarter of a cable's length farther out than other rocks there that are always above water. One of these dries at half-ebb, the other about low water, &c. &c.

There is a gravelly beach which extends from the Foot Point of Valentia eastward toward Rinaard Point, about half over; the extremity of it is dry with spring-tide only. To avoid this shoal, keep one-third from Rinaard Point and two-thirds from Foot Point, &c. &c.

The

* Moorings could be easily put down; but I have not heard of ships not being able to ride out safely the heaviest gales of wind in that harbour.

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The west entry of Valentia Harbour is clear of shoals as far up as Portmagee; right opposite to which, on the Valentia side, there is a small bay where a vessel may stop on two fathoms, clean sand and pretty good shelter. To go up further into better shelter requires high water and a skilful pilot; for when you pass the small island at Portmagee there are shoals on each side, and the channels between them narrow and irregular.

The River Shannon.

The Shannon is a river of easy access, where fleets of the largest ships may ride in safety in all weathers. There is a light kept on Loop Head at the mouth of the river, which may be seen four leagues off, &c. &c.

Birterbui Harbour in Galway.

Birterbui Bay is capacious, well sheltered, good ground, and capable of the largest ships; vessels may ride on the east side of Ilanochly on from four to eight fathoms water, or any where above that, near the middle of the bay, &c. &c.

As much difference of opinion has arisen respecting what particular parts of Ireland would be crossed by a straight line being drawn on the surface of the globe between Liverpool and St. John's in Newfoundland, I have drawn out a map taken from the sphere, in which parts of both Europe and America are shown, and also the straight line crossing Ireland, running between St. John's and Liverpool, and which line crosses through Clew Bay in Mayo.

Further, suppose a ship is going from the Land's End in England, lat. 50° directly across the Atlantic on an arc of the sphere, to Cape Race, Newfoundland, lat. 46° 40′, she will reach, in crossing the Atlantic on this line, to lat. 50° 45′, which will be about 45 geographic miles to the north of the Land's End. To prove this it is only necessary to examine a sphere, and see how the straight line between the Land's End and Cape Race cuts the parallel of lat. 50°. To illustrate this fully, I beg leave to refer to the two small maps which I have drawn out, and now deposited with the Committee.

Map No. 1. contains the British Empire, and on which is delineated the London and Liverpool Railway, and the various lines across Ireland to Galway Bay, Broadhaven, Westport, &c. &c., and the Western Railway from London to Bristol, and the railway connexion from Waterford to the harbours of Valentia, Bantry Bay, Bear-Haven and Kenmare River.

Map No. 2. exhibits the Atlantic, with the shores of Ireland on one side and those of Newfoundland on the other. These Maps will be found to show the true positions and to afford any explanation required.

The following Table of Latitudes and Longitudes may be found useful:

	Latitude.			Longitude.			
	°	′	″	°	′	″	
Paris (Observatoire)	48	50	14	0	0	0	Conn. des Tems.
Greenwich (Observ.)	51	28	40	2	20	15	
Dublin	53	23	13	8	40	45	Riddle.
„	53	21	11	8	39	0	Conn. des Tems.
St. John's, Newfoundland	47	33	45	55	0	0	Conn. des Tems.
„	47	34	35	54	58	52	Purdy.
Liverpool	53	22	0	5	17	0	Conn. des Tems.
Ditto - St. Paul's	53	24	40	5	19	10	Mudge.
London, St. Paul	51	30	49	2	26	2	Mudge.
Bristol Cathedral	51	27	6	4	55	44	Mudge.
Cork	51	53	54	10	50	15	Longfield.
„	51	51	50	10	49	15	Conn. des Tems.
„	51	55	31	10	36	45	Riddle.
Bellmullet, at Blacksod, and	54	10	15	-	-	-	L'Evêque.
Broadhaven	54	13	24	-	-	-	William Bald.
Bantry Port, Sheep's Head	51	36	0	12	24	15	Malham.
Galway	53	28	30	11	33	15	Ducom.
Achil Head	54	7	0	12	51	15	Ducom.
„	53	58	20	-	-	-	William Bald.
Clare Island Light-house	53	58	0	12	33	15	Ducom.
Ditto - ditto	53	49	34	-	-	-	William Bald.
New York	40	42	0	76	28	15	Blunt.
„	40	40	0	76	18	52	Oltmanns.
Halifax	44	44	0	65	56	0	Conn. des Tems.
„	44	36	0	65	48	15	Blunt.
Valentia Harbour, Ireland	51	55	25	-	-	-	Chart published by the Admiralty

Longitude from Greenwich 10° 16′ 34″

Mr. *William Bald.*

19 June 1835.

On the Utility of the Formation of Seaward Harbours on the Coasts of Mayo and Galway, and which lie most adjacent to the Great Fishing Banks and Fishing Grounds.

THE extreme seaward position of the isles of Innish-Kea, Innish Bofin, Innish Turk and Clare Island, claim attention not only on this account, but also for their contiguity to the best and most productive fishing grounds and fishing banks which lie off that part of the coast of Ireland, and on which there are in particular an abundance of cod and ling of the best kind.

The improvement of Bofin Harbour, by erecting a small tower or beacon on the sunk rock and shoal at its entrance, would be most useful, and also landing quays within it for the accommodation of the fishing vessels and boats. The construction of harbours or breakwaters upon the other three islands above mentioned would give great facilities to the vessels and boats employed in fishing, by affording shelter and safety to them in time of storm. At the island of Innish Turk, for example, there is sometimes not less than from two to three hundred boats employed there on the herring fishery belonging to the neighbouring coast, and they are frequently exposed to the danger of being lost and wrecked for the want of a safe harbour at that island. The late Fishery Board of Ireland built a small pier in Innish Turk, but it did not afford the required safety and security to the fishing vessels and boats engaged in the fishery, besides it was allowed to be gradually carried away by the sea, which comes in very heavy from the north-west on that coast. The under ground swell of the Atlantic is very powerful, and any works erected at these islands for the protection of the fishing vessels and boats would require to be done in the most solid and substantial manner, *in great mass*; indeed any thing on a small scale would be quite useless. The erection of harbours or breakwaters on these seaward islands would not only be valuable in affording facilities to the successful prosecution and extension of the deep-sea fisheries on the great fishing banks which lie off these islands, but would also be found most useful and protective to all the trading vessels which frequent the western shores of Ireland. A breakwater at the east end of Clare Island would give great and useful security to the whole of the trading and shipping interests of the towns of Westport and Newport. Indeed a properly designed and well constructed break water at Clare Island would also give security to the whole of the fishing and coasting trade frequenting the towns and ports in Clew Bay. The position of Clare Island at the mouth of one of the largest and finest bays in Europe, points it out particularly as a place extremely eligible for the erection of an asylum harbour. It would give security and seaward protection to all vessels navigating between Slyne Head and Achil Head, a coast of several hundred miles in extent. I already mentioned I had read the report of Murdoch Mackenzie in favour of a harbour at Clare Island; I have also to add that I read the report of the late William Wallace, civil engineer, with whom I was well acquainted, and who was employed a few years ago by the Viceroy of Egypt to deepen and improve the port and canal of Alexandria, and in which country he unfortunately perished. Mr. Wallace's report is extremely favourable to the erection of a harbour at Clare Island; and in addition I have read the report of James Murray, an engineer of considerable power and talent, and who died in early life while engaged in the execution of the works of the Royal Canal in Ireland; his report is also extremely favourable to the great utility of erecting a harbour at the east end of Clare Island. I am not aware of any place on the west coast of Ireland where an asylum harbour is so much wanting as one at the east end of Clare Island; it therefore claims national attention for the protection it would afford to the general maritime trade of the country on that coast.

The chief, ruler or statesman that will be able to form asylum harbours on the unsheltered and dangerous parts of the coast, and will also cause to be marked or beaconed, by the erection of granite towers, the dangerous rocks, the shoals, and the reefs which surround the shores of these kingdoms, thereby giving safety and security to the mariner in time of tempest and storm; also safety to the floating wealth of these realms, and the colonies thereunto belonging; also lessening the wail of the widow and the orphan throughout this maritime land; will not only receive the blessings of future generations for the erection of these works of mercy, tending so much to the preservation of life and property, but will also increase, to a great extent, the wealth, the power and prosperity of the whole empire.

It would be a most interesting as well as a most useful investigation to sound and lay down in chart form all the fishing banks and grounds which lie off the west coast of Ireland; because these fishing banks are more valuable in a national point of

of view than mines of silver, if but the art and industry of man could once be fully employed in drawing in the stores of wealth which abound on them. Raynal has said, "Mines can be exhausted, and the fisheries never are; gold is not reproduced, but the fish are so incessantly."

It is a well-known fact that the inhabitants of Barra, one of the Hebrides or Western Isles, carry on a most profitable and remunerative trade in fishing for cod and ling, which they carry in a dried and prepared state round the Mull of Cantire to the Clyde and Glasgow, where it is sold; this fishing trade is only pursued during the early summer months, and which is to them a source of very great wealth.

I beg leave to recommend or rather to suggest, that the large manuscript maps of the bogs in Ireland, which are deposited in the Royal Dublin Society, be cut into compartments, and bound into volumes in Atlas form, because in that state they will remain perfect for ages; whereas at present they are on rollers, forming very large maps, which are difficult in the extreme to be preserved; the very rolling up and down will wear them away; and as those surveys, maps and reports have cost nearly forty thousand pounds, it would be in my mind extremely proper that every means should be taken to preserve them as long as possible. The manuscript reports and sections might also be bound into volumes, and the whole could be then deposited into the library of the Royal Dublin Society, and the expense of doing this would be very trifling. The idea of arranging the bog maps in this manner occurred to me when I saw in the Bibliothéque du Roi how the French had preserved the original manuscript map survey of Ireland, by Sir William Petty, in so perfect a manner, for more than one hundred and sixty years; these maps, in two large volumes, can be readily seen in the *Manuscript* department of the National Library at Paris. The ship which was carrying the maps from Ireland to England was captured by a French privateer from St. Malo, and the maps were then deposited in the archives of France, where they have since remained, and where that attention has been paid to their preservation which every lover of science must admire.

FitzStephen French, Esquire, a Member of the Committee; Examined.

3114. HAVE you turned your attention to the waste lands of Ireland?—I have.

3115. What is their extent?—Mr. Cowley estimates as capable of improvement 4,900,000 acres, as not improvable 2,416,000; the public records in 1824, gave them at five millions and a half improvable waste lands, and half a million unimprovable; Mr. Newenham at 4,800,000 improvable, and 1,185,585 not improvable; Mr. Griffith estimates the whole of the waste lands at 5,340,736 acres.

3116. Do you consider the reclamation of those lands of great importance?—Certainly; if Ireland is so productive with 12 millions and a half of arable acres at present under cultivation, how much more so (independently of the employment to be given to the population) would she be when the amount of arable land was increased to 18 millions of acres?

3117. Do you consider that labour could be profitably applied in Ireland?—Nowhere is labour more required, nowhere is it so redundant; more than one-eighth of the population, for four months in the year, are without employment.

3118. Have you reclaimed any bog?—I have.

3119. What do you consider to be the average expense per acre?—The bogs that burn red or yellow ashes are easily reclaimed; the bog that burns white ashes requires more time and a much greater outlay of capital. Generally speaking, as far as my experience leads me, I think they may be drained and levelled at about 1*l.* 10*s.* an acre, and covered with gravel or other calcareous substances at from 2*l.* 10*s.* to 3*l.* per acre. I am aware that Mr. Griffith estimates the claying much higher, but I should be afraid to put four inches deep of gravel or clay on a bog at the time of reclaiming it, considering as I do that the weight of the gravel would sink it through the bog.

3120. Have you seen the Report of the Bog Commissioners?—I have; and in a small way have executed some of the works laid out in them. I found the drains could be made at somewhat about half the price laid down for them in the estimates, and I can only conceive the sums given by the engineers to be required to a very great increase in the value of labour, which might be the consequence of an increased demand for it.

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3121. Do you consider that Government ought to give any assistance towards the reclamation of these lands?—I think the rivers that would serve for the main ventages of the different bog districts, should be opened at the expense of Government; and that some assistance should be given towards opening the roads throughout the deep and inaccessible districts of bog, as Colonel Burgoyne, Mr. Griffith and others have so fully stated to the Committee; and if the Government did so much, I am confident that the private capital of the country would effect the remainder. By the word capital, I mean not only the pecuniary means of the upper and middling classes, but the labour of the lower orders, which must be considered as capital, although at present it is perfectly unprofitable.

3122. Do you think that the people could be advantageously located upon these waste and bog lands?—I do; I made an experiment on a small scale myself with seven families who had been dispossessed of their holdings, and who had no property of any kind among them. I built houses for them, and they have now reclaimed from three to four acres apiece, and there is not one of those families now without a milch cow.

3123. What crops do you consider bog or waste lands will yield when reclaimed?—All green crops, such as potatoes, carrots, rape, mangel-wurzel, cabbages, white crops, though generally speaking the grain is not so full as in the upland; it runs more to straw; rye does better than any other grain; all grasses do remarkably well in bog lands, especially Fiorin and Timothy.

3124. Do you consider it the custom in Ireland for all landlords to allow for improvements made by their tenants?—I do; for improvements of a certain kind, such as limeing and gravelling, if undertaken on certain conditions; such as allowing the lands to remain after the gravel has been turned out, without breaking up for three years. If it is suffered to remain thus long, we consider the benefit the land receives to be visible for 20 years; but if the land be broken up immediately, the benefit is confined to the crop. In the former case it is just that the landlord should allow for the benefit conferred on the land, and in the latter, the benefit being enjoyed exclusively by the tenant, he has no claim for an allowance.

3125. Do you consider the lands so reclaimed likely to relapse?—No, the improved bogs mentioned by Arthur Young are reported by Mr. Griffith in his bog surveys, 40 or 50 years afterwards, to be profitable land, and not to show any appearance of relapsing into their former state.

3126. Generally speaking, is not the land of Roscommon of a very superior description?—A large portion is of the finest description of land in Ireland; but there are considerable tracts of lighter land, and a large tract of waste.

3127. What do you consider the average price of the rich lands in that county?—About 35*s.* the Irish acre. These lands are chiefly devoted to pasture, and are held in large tracts by the great graziers, men of capital, intelligence and industry, who will not give a higher rent for their farms than that which will enable them to receive a fair return for their time and capital. The poorer lands rate comparatively higher in consequence of the competition for land amongst the lower orders.

3128. What do you consider the fall in the value of land since 1814?—From 45 to 50 per cent.

3129. You stated that there are large tracts of waste in the county of Roscommon; what is the amount, and were those tracts included in the bog surveys?—They amount to 80,000 acres; they will be found in the bog reports; the Lough Gara district, surveyed by Longfield; the Upper and Lower Suck, by Griffith, and the district of the Shannon, by Edgeworth.

3130. At what rate was the reclamation of these bogs estimated?—Mr. Longfield estimated the drainage, making the necessary roads and deepening and improving the navigation of the rivers, at 1*l.* 17*s.* 2*d.* per English acre. In his plan he lays down several navigable cuts, with a view of employing them as small canals for the conveyance of gravel and manure, and for carrying into effect a system of irrigation, the effect of which has been found very useful in the reclaiming of bog. Mr. Griffith estimates the drainage alone in his district at 1*l.* 3*s.* per English acre. Mr. Edgeworth proposes the introduction of railroads; a suggestion which has lately been adopted by Mr. Featherstone, Lord Clonbrock and others. I do not exactly know what estimate Mr. Edgeworth has made of the expense.

3131. Do you consider the estimates made by these gentlemen likely to cover the expenses?—I do; Mr. Griffith, Mr. Aher and other engineers have told us that their subsequent experience has not induced them to alter their opinions; and

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Mr. Nimmo has estimated the making of the roads and the drainage of the districts he surveyed at 1 *l.* per English acre.

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3132. If the Government, or a company of individuals, were to undertake the reclaiming of the waste lands of Ireland, do you think they might equitably claim from the proprietors a portion of the improved lands in remuneration of their services?—I do; this principle has been recognized and acted upon to a great extent in England; and without some such measure I see but little prospect of the bogs of Ireland being brought into cultivation.

3133. Do you remember any of the instances in which this principle was adopted?—In the 41 Elizabeth, Captain Lovell undertook the drainage of Deeping Fen, on condition of receiving one-third of the lands reclaimed. In the forty-third of the same reign a general Act was passed for the recovering of many thousand acres of marsh and fen, then subject to commonage; and a power was given to the owner, and a majority of those having a right to common, to convey to the undertakers such parts of the land as might be agreed on by way of reimbursement. From this Act the Crown lands were excepted; but James I., seeing the benefit of the arrangement, consented that they should be brought under the same regulation. Dagenham Marshes were drained by Vermuyden, who had a portion of the land assigned to him, and confirmed by patent in 1621. In 1626, he offered to execute the great level, on condition of 95,000 acres being assigned to him. This work was afterwards undertaken by the Earl of Bedford, and a company incorporated 10 Chas. I., on the same terms; but 40,000 acres were assigned to them. As the lands were found to be still liable to be flooded in winter, the King undertook to perfect the work, on a certain portion of the lands being allotted to him. In 1649 the Bedford Company was revived, and, having obtained their original contract, completed the works in 1658. The South Holland and Lindsey Levels were undertaken by Robert Earl of Lindsey, who had 20,000 acres of the land recovered assigned to him.

Mr. *Alexander Nimmo*, called in; and further Examined.

Mr. *A. Nimmo.*

3134. FROM your knowledge of Ireland, do you think she has increased in her agricultural pursuits?—Ireland has, in the cultivation of her fertile soil, advanced more rapidly within the last half century than perhaps any other country in Europe; and from her being almost exclusively devoted to pasture, and reduced to the necessity of importing corn to the extent of half a million, she now, with a vastly increasing population, yearly exports to the amount of four millions of tillage produce, without any perceptible diminution of her grazing system; but it is remarkable that so little exertion has been directed towards overcoming what is usually esteemed the primary obstacle in subjecting wild lands to the purposes of agriculture.

3135. That primary obstacle is the drainage?—Drainage, one would have imagined, in such a country as Ireland, with so moist a climate, so many extensive morasses, lakes and water-flats, should have attracted the earliest attention, and he now well understood. From various circumstances, however, arising either from her political troubles, or the late period at which her people began to study the means of agricultural improvement, we search in vain her history for any attempt to recover those wastes, or even to free the fertile bottoms along her rivers from periodical inundations.

3136. Do you not think that the damming up the rivers is a great cause of the extent of waste land?—Independent of the vast bogs which overspread great part, and especially the centre of this fair island, a number of her rivers and streams are still allowed to extend themselves over wide tracts, which, if embanked, drained and cultivated, would be found most productive land. Mill-sites, injudiciously chosen, and even pitiful eel-weirs, are permitted to dam up these streams, and to inundate or damage the most valuable meadows.

3137. What is the cause of this neglect?—The radical cause of this apparent neglect is the want of co-operation, rather than of capital; for in a country abounding in hands, all that is wanted is to set them to work. The numerous and idle poor already exist, and are supported. No additional expense, therefore, can fall on the community by employing them in useful works, over what is at present required to keep them in unproductive and often mischievous idleness.

3138. Are there not many landlords and leaseholders in Ireland?—We have many industrious and improving landowners and lessees, who are well disposed to

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contribute their proportion towards draining the morasses, or clearing the courses of rivers and streams, which disfigure or injure their own and neighbours' lands; but from the inability, indolence or obstinacy of some of their neighbours or tenants, the variety and intricacy of tenures under which lands are held, the consequent difficulty of ascertaining the relative benefits, and levying the just proportion of contribution, these improvements are altogether prevented, or if attempted in favourable cases, are confined to the lands of an individual, whence they are usually rendered unnecessarily expensive to the undertaker, and but partially successful.

3139. What remedy would you suggest?—The remedy for this is obviously some legislative enactment, which would empower properly qualified and disinterested persons to ascertain the extent of injury, and the probable benefit to each individual concerned, to lay down and carry into effect all such measures of improvement as appeared to be of general benefit, and to defray the expense by an assessment or tax, proportionate to each person's interest in the benefit received.

3140. Commissions of this kind have long been used in England?—Yes, and have been productive of the greatest advantage to agriculture. In Ireland, I believe, there has never yet been any commission of drainage; I hope the result of this Committee will be to open the way in this department of rural policy.

3141. In another department Ireland has already reaped great benefit from the Legislature having permitted the levy of assessments for local improvements?—No doubt. Her roads, and especially her cross-roads, are confessedly the finest in Europe; and her rapid progress in agriculture, though in the central parts perhaps much promoted by her inland navigation, yet certainly is in a much greater degree owing to the excellence and facility of her inland carriage.

3142. If these improvements were made, the consequence would be a lasting benefit to the country?—The multitudes of poor, who cry aloud for employment and food, could not possibly be engaged in a more useful or promising object, than the drainage and cultivation of our marshes and wastes; thereby, while we improve our climate, and extend our agricultural territory, we may at once be relieved from idleness, famine and disease.

Mercurii, 24° die Junii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

Mr. *Charles Wye Williams*, further Examined.

Mr. *C. W. Williams*
24 June 1835.

3143. HAVE you any further suggestions to make to the Committee?—I wish to make one suggestion with respect to the importance of empowering the Board of Public Works in Ireland, where short lines of roads are of great importance; giving them a compulsory power to make such roads, or to require the grand juries of the several counties to make them. I received this day a letter, which bears so much upon the point, that I think the Committee should have it before them.

3144. Are you willing to hand it in?—Yes; it is an extract of a letter from Mr. Sharpe, civil engineer, to the Secretary of the Dublin Steam Packet Company dated Limerick, June 19th, 1835. "I have just returned from the sessions at Woodford, where I found a most determined opposition to the Williamstown Road. I succeeded, however, by a majority of one cess-payer, and this one I obtained through the influence of Mr. Glessin, the priest of Whitegate parish. Mr. ——— was the most violent opponent; but the magistrates obliged him, on affidavit, to admit the utility of the line. I have never met so severe a conflict in obtaining a presentment. I was under examination for at least two hours before the bench; and obliged to state, that if the presentment was thrown out, the Steam Company would abandon the station, and not expend a single shilling on the Galway shore. The terms of the presentment are, that the Board of Works pay one-half of the expense, your Steam Company one-fourth, and the county Galway the other one-fourth."

3145. From your own observation, has that difficulty occurred where similar lines of road have been required in other parts of the country?—Yes.

3146. Has a similar want of roads been felt in other places?—I am persuaded that similar wants would be felt along the entire coast of the river Shannon. The road

road to which this letter refers is but a few perches long. It professes to introduce the entire of a very large district to the Shannon, and is the only road to that river along a coast of 30 miles; and yet at the sessions, so great was the objection to this road, that it was only carried by a single voice. It will be observed that the conditions on which the presentment was granted are, that a private company should pay one-fourth of the expense of the road; whereas there is not a man in the county of Galway who should not be anxious to make it. The inhabitants of Galway have no other access to the harbour.

3147. When you talk of the county of Galway, would it not be reasonable to confine the expense to the district adjoining the river?—Very likely it might; but it is so insignificant in point of expense, and the advantages of the road are so very great, that I am only surprised there should be any objection to it, and yet the most violent opposition was exerted, and the road was only carried by a single voice.

3148. You are of opinion then, that a compulsory power should be given to the Board of Public Works for the purpose of compelling these roads to be made, which, in these instances, communicate with a large river?—I am; and I am persuaded that nothing more salutary could be adopted or recommended by this Committee. I do not suppose that in all Ireland there is a short line of road so essential as this to which I allude; and I call the attention of the Committee to it, because I am persuaded it is an instance in which, if a compulsory power were given to the Board of Works, it would be exercised with great benefit to the country, in compelling such roads to be made.

3149. But there are other cases to which it might be applied with equal advantage?—Yes, in different parts of the country, and along the whole coast of the river Shannon, similar cases would occur in which it would be of great advantage to the districts to open communications with the river.

William Blacker, Esq. called in; and Examined.

3150. I BELIEVE you are a land-agent in Ireland?—I am.

3151. In that capacity have you had considerable experience in the agricultural improvement of land, and reclaiming of bog and waste lands?—Yes.

3152. Will you have the goodness to inform the Committee in what parts of the country?—In the county of Armagh chiefly; some in the counties of Tyrone and Cavan, and likewise in the county of Down. I have agencies in different parts of Ireland.

3153. Are there in any of those counties large portions of bog or waste land capable of being reclaimed?—In the county of Tyrone, on the property that I manage, there is a considerable extent of bog land, called Munchas, or islands of clay, in the centre of a boggy tract of country.

3153*. Have you reclaimed any of those lands?—There are some small portions in progress of being reclaimed.

3154. By whom, by the landlord or the tenant?—The tenant.

3155. Is there any encouragement given to the tenant for that purpose?—Very trifling; they were cotters on the property, and it was proposed to them to give up their present cottages and to take a small allotment on the edges of the bog, which they agreed to do, and they have built houses for themselves.

3156. Have they that bog rent-free?—For the first year.

3157. Only one year?—Only one year.

3158. Have they any lease?—None.

3159. And are they now improving that land without any certainty of tenure?—They have only a confidence in the good feeling of the landlord.

3159*. Can you inform the Committee the manner in which they have reclaimed this bog, or the measures they have taken for that purpose?—It is generally by spreading a little clay over the surface, and with the assistance of ashes and what manure they can scrape together; we also lend them some lime, and they mix all that together into a kind of compost, and that forms the soil.

3160. Is there any general system of drainage adopted?—Yes; we make the drains.

3161. What description of bog is it?—Generally it is the very worst description of bog.

3162. The red bog?—Yes.

3163. Then in general it does not burn red ashes?—No.

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3164. Will you state what general system of drainage is adopted?—It is under the Commissioners of Education, the school lands of Duncannon; they have allowed me to lay out a certain sum of the arrears due by the tenants in giving them work in making the drains in the bogs, and by that means I have brought the bog to a tolerable state of dryness; but it is not so good as it ought to be.

3164*. Then, in fact, you have brought the bog into a fit state of drainage to enable them to cultivate it?—Yes, it will be, I expect, in a certain time; at present it is not so good as it ought to be.

3165. If you had the means, have you any doubt that you might by proper drainage reclaim the whole of that bog?—There is no question of it.

3166. Can you state to the Committee at what expense it could be done?—If it were done by hired labour there is no doubt that it would be a very expensive thing; but if you do it by advancing such materials as are necessary to put the industry of the tenant into action, and enable him to get a return for his labour, it may be done at a very trifling expense. In general, improvements are begun by building houses and other buildings unsuitable to the poor circumstances of the inhabitants, and which they are not able to keep in repair. The good house ought to be the consequence of the improvement of the land, and the improvement of the circumstances of the occupiers thereby; increased comfort ought to be the fruits of industry. Where extensive draining or fencing must be done beyond the power of the individual settler, that may be done, and the interest of the sum laid out may be charged as rent; but no judicious improver under ordinary circumstances ought, in my opinion, to do more than prepare the land for the occupation of tenants.

3167. The Committee are desirous of knowing the amount of the pecuniary expense if you can state it?—I can only state it from recollection; but it is so very trifling in the mode I have adopted, that you will see at once it is an immaterial consideration.

3168. Then you presume that the tenantry reclaiming these bogs work at a lower rate of wages when each man works for himself than they would if they worked for an improving landlord?—Yes, he will work twice as much for himself as he will for his landlord.

3169. And at twice as cheap a rate?—He does it for his own benefit, as we only charge him for the original value of the allotment. If he makes it better he has the benefit of it for a certain time, and he trusts to the landlord to make him compensation by not charging him hereafter the full value of the land in its improved state. Thus he acquires the tenant right in a small holding, which is in itself considered a very valuable acquirement.

3170. Will you state the number of persons so allocated?—There are, I think, either 34 or 35 families allocated, and I think the entire expense of building the houses and the outgoings altogether amount to 150*l.*

3171. Will you state the pecuniary expense per acre of the drainage you performed in that bog?—It is not exactly on one spot where these people were allocated, nor was it in reference to their immediate holdings, that the drainage took place; they were allocated more upon the outskirts of the bog where there has been very slight outlay for drainage.

3172. Can you state to the Committee as nearly as possible the amount of pecuniary expenditure, at what rate per acre, where you did drain the bog?—It is not done so effectually as that it could give any information to the Committee. We have laid out about 300*l.* in making drains and forming roads through the place, and there is an extent of 800 or 900 acres, but the thing is not yet complete.

3173. Have you made use of the rail-road?—No, I had not the experience of seeing it used at that time. I have seen it now, when I have proposed to the Commissioners that something of that kind should be adopted. I think it is of more advantage to the making of roads than actually making the bog into soil, for I rather anticipate, in the course of a few years, that the property will be as valuable for turf bog, as fuel, as it would be in a reclaimed state, and therefore I should not, without considerable consideration, recommend an extensive outlay, in making it arable land, until I saw what it was likely to produce in the other condition; but the outskirts of the bog I think it is advisable to allocate these people upon, as I only proposed to them a loan of two guineas to assist in building their cottages, which are of mud; they are of the commonest description; but still they are a thriving and very contented population, and they acknowledge they were never so well off in their lives before.

3174. Are the Commissioners you spoke of the Commissioners of Erasmus Smith's

Smith's school?—I believe they are; they have jurisdiction there; the Primate is at their head.

3175. Are there any other bogs adjoining the land to which you have already referred?—None of very considerable extent.

3176. Are there any waste lands in these counties independent of the bog, to which you have referred?—Not in that immediate neighbourhood.

3177. Are there any waste lands capable of being reclaimed in the county of Armagh?—Yes, there are considerable tracts bordering on Lough Neagh, and near the Fews mountains, which are not brought into cultivation.

3178. Has not Mr. Brownlow reclaimed some bog land in that county?—He attempted to do it under the direction of Mr. Nimmo, the engineer, by embankment; but he has been unfortunate in that, for the Lough (Lough Neagh) rose to a great height, and overflowed it.

3179. To what do you attribute his failure?—It is quite clear that it was from the rising of Lough Neagh, which overflowed his embankment, and swept away a great part of his improvement. It destroyed his system of drainage, by pumping by steam-engine.

3180. Was the bank raised of a sufficient height?—It was considered so by Mr. Nimmo; but the fact is, that Lough Neagh is rising every year.

3181. Had a greater flood taken place that year than had occurred for many years before?—Yes, than had occurred for 20 years before.

3182. From what does the annual rise proceed?—The outlet is choking up gradually. There is but one outlet at Toome by the lower bar; and there are a variety of rivers carrying floods constantly into the Lough, so that the absorption of the surface is not equal to keep down the rise.

3183. Have they erected weirs upon the rivers?—There are eel weirs near Toome Bridge, which is to a certain degree an obstruction, and the bridges themselves; the foundations of them form a barrier against the flow of the water.

3184. Was it not supposed in regard to Mr. Brownlow's improvement, that the water rose from the ground, being on a lower level than Lough Neagh?—I saw the work in progress; a steam-engine overcame that; it did take place, and he had brought down the lake he was draining to a state of mud, in which state the engine could have no effect. It was a mere pumping engine. I always apprehended it would scarcely pay the expense of an engine constantly going to keep it dry, which would be necessary.

3185. In your opinion, would it be beneficial if tenants for life had the power of expending money for the reclaiming of those waste or bog lands, and of charging the inheritance with the amount of that expenditure; and if that is your opinion, under what circumstances would you recommend it?—It would be very difficult to say by what provisions the remainder-man might be secured against an injudicious outlay; otherwise the principle is good, and if generally adopted, not only by tenants for life but by all landed proprietors, and likewise extended to the inclosure of commons, &c. the most beneficial results would follow. It would not only be the means of giving immediate employment to a pauper population, but it would likewise correct, or, perhaps, remove the oppression and rack-rents of middle-men, by giving the tenant the alternative of being readily able to get a settlement elsewhere. Those who remained would also be benefited by being able to acquire an addition to their farms, and exorbitant rents would be checked by so much additional land being brought into the market; therefore in every view of the subject the whole agricultural population would be most materially benefited. Taking off the malt-tax, extinguishing tithes or any other burthen pressing on the land, is only a temporary relief to the occupier, while his present tenure lasts, at the termination of which, if the demand and supply continue relatively the same, the land being worth more by being relieved from these burthens, will be of course set at a higher rent, and the advantage goes to the landlord. The *only* way effectually to serve the occupier of land is to increase the supply by bringing more into cultivation, and thereby lessen the competition which will enable him to make a better bargain with the landlord.

3186. You have turned your attention very much to the cultivation of arable land, I believe?—A good deal.

3187. And also to green crops?—Yes.

3188. Have you been successful in introducing the system of green crops into Ireland?—I think more so than I ever could have expected, and it is spreading very much over a large surface in Ireland. I have sent agriculturists to a number of

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noblemen and large landed proprietors, who are following the system, and every where I find with success.

3189. Have you induced the poor people to adopt that?—Certainly; it is for the benefit of the poorer classes, and in fact it is one of those cases in which the poor people teach the rich; for the poorer they are, the more dependent they are on the landlord and the agent, and under their influence they will try an experiment, which a wealthy man who can pay his rent and is independent of his landlord, is not at first disposed to do; but seeing the advantage of it in their poorer neighbours they have come to be proselytes to the same system.

3190. How is it they introduce these green crops; is the clover after the wheat crop?—Yes; it is sown with the first grain crop after the manure has been applied.

3191. Will you state what is the practice you adopted respecting these green crops?—The advantage of green crops is evident, and has been insisted on by all agricultural writers. My exertions have merely been directed to devise some plan of inducing the small farmers to cultivate them, and that is done in this way. If a small farmer says, "I have not manure," I reply, "I will lend you a certain quantity of lime, which will supply the place of a certain quantity of manure; that manure which I thus enable you to spare, I will require you to lay out in the cultivation of turnips, or some moist food, for your cattle in winter. I will lend you clover-seed to sow with your oats or barley, or to harrow it in upon the graining wheat in the spring; and that is not only improving your wheat, but it cuts off the necessity of putting in a second crop of grain." It interposes between the two crops of grain, which is the most decided improvement, and of the most absolute necessity of any that can be introduced. By that means, you completely break off that practice, and that is the easiest improvement that can be introduced, for it is attended with no trouble; it is attended with no second labour: the seed is committed to the ground, if it is with a spring crop, with the same operation as sowing the seed; if it is with the winter crop, as wheat, it is done in the process of harrowing the crop in spring, which ought to be done for the advantage of the wheat crop, if no clover-seed was sown; and therefore that is an improvement that is easily introduced; and if you lend the seed, it is constantly successful, and by soiling the cattle in summer, such a quantity of manure is produced, as enables the small farmer to spare some for turnips.

3192. If that is not adopted, do not the poor people in Ireland suffer the land to remain idle for a certain space of time?—If that is not done, they are generally in such distress, that they sow successive crops of corn until the land is fit to bear nothing, and then it lies, as they say, "at rest," but is actually a dead weight; by this means the half of the land, or perhaps even less, is left to pay the rent of the whole, which may be said in itself to double the rent per acre. The unfortunate man, of course, gets into debt for the support of his family, his whole crop being very likely sold to make up the rent; he is obliged to buy on credit, and is charged far above market price. When the credit expires, he is forced to buy an additional quantity at an extravagant price, which he is to sell for what he can get, in order to pay the first bill; and this process being repeated once or twice, the poor man becomes so involved, that he loses all hope of recovering himself. Many instances of this kind have come to my knowledge, and the extent of the poor people's debts has been the greatest difficulty I have had to encounter, for as fast almost as I can improve their situation, their creditors extort their gains from them.

3193. The land left to rest is wholly unproductive?—Yes.

3194. I believe you have written a pamphlet on this subject, which explains your views?—Yes, and which condenses in a small compass almost every thing I have to say, and is to be had at Rodwell's, in Bond-street, or Ridgeway's, Piccadilly.

3195. Is there any deficiency of roads in your part of the country?—No; I think we have full as many as we ought to have, except that they are not laid out as they ought to be. In the road from Charlemont to Newry, which is the main communication with the sea for a great part of Tyrone, Monaghan, Fermanagh, and part of Derry, I believe also there are hills which rise, as well as I recollect, in some cases one foot in nine, ten and twelve feet. A Bill to place turnpikes on it is now in progress, but the tolls will never pay for improving the line, and as it is a road for the greater part of the North of Ireland, which is more interested than the county of Armagh, I doubt whether the grand jury will tax the county for the expense, though the great utility of the work is acknowledged. Great discontent exists

exists in the North of Ireland on account of all Government assistance of this sort going to the South and West. More capital would be put in motion immediately by a grant for part of the expense of this road, or for keeping Lough Neagh to the summer level, than will be brought into action by the outlay in the wild district near Killery Harbour for a century to come.

3196. Are the roads kept in good repair?—They were before the passing of the last Grand Jury Act in the most perfect state of repair in the barony for which I am interested, and at an expense which was not more than was the outlay, I think, 20 or 25 years ago; they were repaired at the same rate, or rather less, though I suppose we have five times as many roads.

3197. How do you account for their not now being continued in the same state of repair since the passing of the Grand Jury Act?—The trouble which the applicant is put to in travelling to post notices, and attending the surveyor. The different attendances that he has to go through is a very onerous imposition upon him, and after he has gone through all that, he is no further advanced in his labour than his neighbour who sits at his fireside; for he can come in and send his proposal, and at the sessions the cess-payers are obliged by their oath to give it to the man who has done nothing, if he proposes to do it sixpence less than the man who has taken all that trouble. My own overseers, when I blamed them for not sending in their plans, stated, "How can you ask me? I should have to walk 70 miles before I could post those notices, and then I am no better off than my neighbour who takes no trouble."

3198. Do you not, then, consider the present system very inefficient?—I do, most undoubtedly.

3199. And it requires alteration in your opinion?—It requires a total alteration.

3200. What alteration would you suggest?—The alteration I should suggest would be this. I think every person should view it in this light; that the grand jury ought to act for the county on the same plan that every individual contractor ought to act on for himself; and if I were the person to contract to keep the roads of the county in repair, the first step I should take would be to send a person I had sufficient confidence in (similar to the county engineer at present) to go over every road in the county, and to make an estimate of the quantity of material by the perch that was necessary to keep that road, considering the traffic that was upon it, in good order during the twelvemonth. I would make that report of the engineer to be the foundation of the grand jury presentment. We all know very nearly what the expense of a ton weight of broken stone is, and we could easily make out a rough estimate of what money would be required. Let that money be presented on the return of the engineer, and let us have deputies in each barony to see that the quantity of material is first laid down by the side of the road, and after inspection spread on the road. By that means, all kind of improper feeling between the engineer and the contractor for the work is totally cut off. At present the engineer is judge and jury; he not only directs the grand jury what terms to give, but he directs them in regard to paying for the work; and whether it is properly executed or not, all depends on his fiat; and though at present there may be no improper understanding between these parties, it is as clear to me as the sun at noon-day that it must come to that; that there will be cases of improper feeling between the man who executes the work and the man who inspects it, if he is to be both judge and jury throughout the business. It must come to that.

3201. In practice, do you think it happens invariably that the grand jury are guided by the opinion or advice of the engineer?—Nine times out of ten I should say they were

3202. Then they have a discretion?—They have a discretion.

3203. That is only as to the execution of the work; it is not as to the sum of money to be expended upon the repair?—When the county surveyor, upon his oath, says that such a sum of money is necessary for these repairs, there is no grand juryman, who is not a scientific man, who will take it upon himself to say, "I understand the subject better than the engineer who was bred to this." The county surveyor is appealed to, "Is that a proper sum to ask?" He says whether it is or is not; if he says it is too much, there is no man in the grand jury who will get up and risk his own opinion against the surveyor, and the thing is thrown out. I know that in my own barony the presentments sent in, in consequence of the trouble and vexation attending the mode of proceeding, have been all far beyond the sum which I had the work done for quite satisfactorily before; and the consequence is, that all

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the presentments almost have been thrown out, and the roads are going out of repair as fast as they can.

3204. The sum demanded was invariably larger than what the surveyor would give?—Yes, almost always.

3205. You state that the bog was in a state of reclamation in the property with which you are connected?—Yes.

3206. You anticipate that the tenants will be successful in reclaiming it?—Yes, I do, on their different allotments.

3207. Do you anticipate that they will do it profitably to themselves?—Undoubtedly.

3208. What remuneration do you expect they will have for their labour in reclaiming that land?—They will have their crops; they will have their crops at a cheaper rate than they could get them at on any other land, and they will have the power of obtaining a larger quantity; for instance, they may get five or six acres of land, suppose at 2*s.* an acre, and by lending them a few loads of lime, and assisting them likewise with the carriage of some clay, from which they can get a crop of potatoes, they can have that crop of potatoes much cheaper than they could have them in any adjoining land, that they could take for the same amount of rent.

3209. What do you consider the original value of this land previous to their being placed upon it?—You would scarcely say it was worth anything; from 1*s.* to 3*s.* or 4*s.* an acre.

3210. Of what value do you think it will be when reclaimed?—I think for some of the best of it, even already, you would get 10*s.* an acre, and it is better worth that than it was 3*s.* or 4*s.* when let three years ago.

3211. At what rate will you probably charge them?—I hold out to them that they should have half the profits; for instance, if the original taking was at 2*s.*, and they made it worth 10*s.* per acre, that is an advance of 8*s.* "You shall have one-half of that, or 4*s.*, which will bring the rent to you for 6*s.* an acre;" and they are perfectly satisfied.

3212. Does the fact of these people having reclaimed or made land that was worth 2*s.* worth 10*s.* per acre, prove to you that men with skill and capital could have beneficially reclaimed the same land?—I do not think a man with hired labour could have done it with profit to himself on the greater part of this land.

3213. Am I not right in my inference that this land has been reclaimed, from these people working for themselves at a much lower rate than they would work if hired by another?—They get their remuneration by getting their crop cheaper than they otherwise could, as I have stated, and by getting the tenant-right of a certain holding. The tenant-right of a holding is a property in itself, quite exclusive of the landlord; they get what they call a settlement, a residence; they are not wanderers on the face of the earth.

3214. Then do you not conceive it is a fair inference that the land derives its fertility, or its being worth 10*s.* instead of 2*s.* per acre, to the miserable and destitute situation of those people, who will at any rate accept of a holding, though in reclaiming the land they get a less remuneration for their labour than they would accept in the way of hire?—No doubt it is from competition for land that they cannot get a settlement elsewhere.

3215. Then would it not be better for these individuals to be placed upon land where their services would be better remunerated?—Unquestionably.

3216. Would not a man be better remunerated for laying out the same labour in America or Canada, than he is in those bogs of Ireland?—I cannot answer that, not being acquainted with the state of things in those countries.

3217. Do you not consider he would?—I cannot answer that; but I am sure, badly as he is accommodated in one of those mud cottages, he does not go through half the misery (at least I should feel it less) that they undergo in the hold of a vessel from Ireland to America.

3218. You have said that that land would on being reclaimed, the way the tenant leaves it, be worth 10*s.* an acre?—Part of it would, and part perhaps would be a little better.

3219. You have stated that, in your opinion, it would not be profitably reclaimed, except by the persons expecting to occupy it?—I think so.

3220. What do you found that opinion upon, as you state you have no correct estimate in your own mind as to what the expense would be?—I argue from this, that even farming in good land, a gentleman farmer finds a very unprofitable concern in most cases, and of course on bad land it must be ten times worse.

3221. Then

3221. Then your opinion is, that tillage generally does not pay a gentleman farmer in Ireland, and that is the ground upon which you put it?—Yes, it is.

3222. You spoke of competition for land; does that competition arise from over population in your part of the country?—I do not think it arises from over population generally throughout the kingdom; but in particular districts there is a paucity of land certainly.

3223. Have you, in your management of estates, found it necessary to remove a certain number of people and allocate them in other places?—Only in the Tyrone estates. I did there; but it was only removing them perhaps half a mile.

3224. Had you any difficulty in inducing them to remove?—No, indeed I cannot say that I had. It was still keeping them on the same property.

3225. Where the land is improved under the allotment system, what rise do you expect in the circumstances of the individuals placed upon it, or do you expect they are to remain small farmers with only the allotment?—Supposing this plan be followed up, as I dare say it will be, they would have the tenant-right of the land: half the increased value of the land would go into their own pockets, and of course their comforts would be extended. They are manufacturers also, and would of course, by having a cheap farm, obtain their subsistence more easily than they otherwise could. They must get more forward in life, and become more comfortable daily.

3226. Have you from experience found that they have purchased the interests of the persons holding next to them?—These are new allotments generally, and there has not been time for that result; but it will come to that, for there are always thriving people who are willing to get hold of any additional farm that lies adjoining to them, and will make great exertions; if they have not the money themselves, they borrow it for the purpose of getting an increase to their farm.

3227. Have you found those tenants who have been induced to follow the plan of green crops, have got larger farms from their neighbours?—I have found that several people have increased their farms; some have sold their own and purchased larger, and others are prepared to purchase as soon as they can get the opportunity; for it is not easily obtained, there is so much competition.

3228. Do you conceive that a small farmer could raise a crop or till his ground, or raise his produce at a cheaper rate than a larger one?—Certainly a small farmer can pay a higher rent than any large farmer can.

3229. And a small farmer does generally pay a higher rent?—I think he generally does, for that he is able to do it I have not the least doubt; that is, provided he is put on a proper plan of cultivation. If he gets the means of following a proper rotation of crops, he can beat a large farmer out of the field.

3230. Do you not conceive that the fact of a small farmer being under a higher rent is to be attributed to the competition for that sort of land among that class of people in Ireland?—Upon large estates, a well-managed estate in Ireland, I think generally the land is not set up to competition. The only way that can be brought fairly into view is in the amount of purchase money which these people give to one another for the tenant-right. They will give a sum equal to almost the fee-simple of the property, to get in under a certain landlord esteemed in the country, and adjacent to their family connexions. An English gentleman who has a property in the county of Wexford, who came to see Lord Gosford's estate, was anxious to get some of the tenants to settle on his property, and he desired me to offer a comfortable farm, with a house on it and every thing ready for immediate occupation, and a promise of any assistance the tenant might require in manure or money, in order to introduce the system of home-feeding there; but not a man would go. The same property would have sold (I mean the mere *tenant-right* without any lease) for 100*l.* or 120*l.* if it had been in the county of Armagh under as good a landlord.

3231. Have you ever turned your attention to the allotment system being adopted on a large scale by the Crown?—I have considered the question with reference to the experience I have had of it, and I think the Crown would make a profit by it if they held a valuation upon waste lands and gave tenures of it. They might either allot it out to the poor population at a rent fully equal to their outlay in the purchase and draining of it, if not greater, or they might, by giving long tenures or perpetuities, get people with capital, who would come and bring it into cultivation without costing the Government any expense; and I think the plan likely to succeed even better with Government if managed as I have pointed out, than with individuals; for the settlers would have more confidence in being secure as tenants to Government, than they would as tenants to individuals.

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3232. The plan has been suggested to the Committee of taking from persons at present possessed of waste lands a portion of their property, as a return for improving the rest of it by the Crown; what would you think of such a plan?—I should think it would be very advisable to get the land into the hands of any person who would give employment to the population by allotting it; there cannot be a doubt on that subject.

3233. But supposing yourself a proprietor of waste land, would you be willing to surrender a portion of it to the Crown to have the rest of it improved?—As the proprietors are situated at present, I think it would be a very judicious thing to do. As for myself, if I had the property I should be very glad to do it on my own account, for I think it is an outlay of money that would pay the best of any I know.

3234. Have you seen any improvements in waste lands in other parts of Ireland besides Tyrone?—I visited Mr. Featherstone's and Lord Clonbrock's very lately; they are carrying on pretty much the same system, but both of them are doing it at their own expense. The true plan is to supply the labouring population with what is necessary to put their industry into operation, and I am sure in that way it is the most profitable speculation a person can enter into.

3235. By loans?—Yes, which are regularly paid back.

3236. Do you find them regularly paid back?—I do.

3237. Will you explain the encouragements and advances that you make to the tenants to whom you allot a portion of bog or improvable land?—The assistance I give them depends on the nature of the soil in a considerable degree, but as a general measure my principal assistance is in lending them manure, as lime, bone dust, &c. and seeds.

3238. To what extent does your pecuniary encouragement proceed?—In the particular instance which I have alluded to, all the assistance I gave, I think, was two guineas for building each cottage, and if I saw them industrious I lent them a little more. The extra loan was to be repaid in one year, but the two guineas were not to be repaid except by seven instalments. Of the 150*l.* lent in that way I believe I am repaid about one-half, so that I am not now more than 70*l.* out of pocket on the allotment system.

3239. That is upon the cottage building, but there is also a pecuniary encouragement for lime and manure?—Lime and manure may generally come to 20*s.* to each, but that is repaid when they get the grain crop from the lime or clay, or whatever is lent to them, or when they get either one or two crops, according to circumstances, generally after the first crop of oats; they pay for the manure, and they keep that in a separate and distinct account from the instalment account.

3240. Then there are three funds, the cottage-building fund, the lime fund, and the seed fund?—Yes; but with respect to the seed fund I get credit from the seedsman, and they repay me in time to pay the seedsman. The landlord is not out of pocket.

3241. Would it not then require a very close looking after of the tenants to have the three funds cared for by them?—If there is some trouble attending it, the landlord is very well repaid, and the labour falls on the agent.

3242. In any Government plan allotment, or any great plan of allotment, where would you place that power?—There must be inspectors to preside over the general improvement of the district, and I would have under him an agriculturist, in the same way that I have an agriculturist under myself, and then the inspector would oversee the thing in the same way as a land agent oversees the estate. But I should mention, that from that allotment system I have now a well-secured rental coming in of between 50*l.* and 60*l.* a year, and I am not 70*l.* out of pocket of all the money that has been lent, without any other expense at all.

3243. How many acres have been allotted by you in the whole?—I should think there might be from 120 to 150 acres, or perhaps more. I am unprepared for this examination, and speak from recollection.

3244. How many acres are there generally in each allotment?—From four to six.

3245. Can you state how much it would cost a gentleman to reclaim that land?—I cannot state the exact expense; but I am sure he could not reclaim it with advantage by hired labour, except under very favourable circumstances, and even then he ought to let it to tenants as soon as possible, or grain it if practicable. I do not think it will repay cost of labouring it.

3246. How much do you think it would cost him per acre to do it?—I cannot state

state from recollection. There is the carriage of clay, lime and other things which I cannot give a satisfactory estimate of; they vary so much according to circumstances of carriage hire.

3247. Which do you consider most advantageous to the tenant, to give him a small portion, say two-and-a-half acres of good land, or seven acres of land which requires to be reclaimed?—I would rather give him the seven acres; for if he be an industrious man, I think he is better off with the seven acres which require to be reclaimed.

3248. Do you find that those tenants who upon an average get an allotment of five-and-a-half acres upon this bog, are or would be desirous to take more upon the same terms, if you had the power to give it to them?—They would be all anxious to take more; but I consider that the allotments which they have in general are sufficient for their present means.

3249. Is the following calculation of the loan of 150 *l.* to 35 tenants on 150 acres a correct one:—

4½ acres - -	£. –	9	– old value at 2*s.*
„ - - -	2	5	– new value at 10*s.*
„ - - -	1	7	– new rent at 6*s.* per acre?—

Yes, that is a perfectly correct calculation, upon the principle I laid down.

3250. Then the amount of profit will be as follows:—

	£. 1	7	– new rent.
	–	9	– old rent.
£.	–	18	– net profit to landlord on giving a loan of

4 *l.* 10*s.* to the tenant, or thereabouts?—Yes, and giving the land.

3251. He receives the rent too?—Yes, the landlord must be a sharer in the improvement of his estate. That is admitted on all hands, that the landlord ought to derive a profit from it.

3252. But he derives the whole of the benefit?—No, the tenant has the 4*s.* per acre abated during his further term, and has had the assistance free of interest; and I think the tenant is very well off, for if that value is calculated with the value of the tenant-right, you will find he will have realized a fair remuneration for his labour, at least more than I am aware of his being able to do in any other way: for example:

	£.	*s.*	*d.*
Four and a half acres, as above, at 9*s.* rent, will be worth, on an average of the last three years, 8*s.* per acre, viz. 36*s.* a year, being a profit of 27*s.* a year for three years, amounts to - - - - - - - - -	4	1	–
Supposing him then to get a 21 years' lease, he enjoys the land at a reduction of half the improved value, viz. 4*s.* per acre for 21 years - - - - - - - - -	18	18	–
Tenant-right acquired at 4*l.* per acre, but would bring more	18	–	–
Profit to the settler free of interest - - £.	40	19	–

I think this is a fair remuneration, when it is considered he has had the profit of his crops and assisted besides by capital from his landlord, according to the plan I recommend. I do not see any thing but agriculture that can afford such remuneration, nor such constant employment; and it seems to me a great defect in the system of education provided for the working classes, that in no one case has there been hitherto any instruction afforded to the pupils upon that very point which is of the greatest importance to nine-tenths of them, viz. agriculture, by which they must hereafter earn their livelihood. I should wish to see some treatise of an intelligible nature addressed to the understanding upon the defects in the system now prevailing, and pointing out a better, put into the hands of the elder boys, with permission to take them home to read to their parents; and if this was followed up by having an allotment of a couple of acres of land made to each school, and an agricultural inspector to come round in order to point out the proper cultivation of it, and thus make every school allotment a model farm; by having this arrangement, the agriculturist could call the parents of the children together, and talk over the plan recommended, answer the objections stated, and point out the advantages upon the model farm, and thereby make the whole clear to the dullest apprehension. In this

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way great advance might be made in the spread of agricultural information at little or no expense; one book is as cheap as another; the schoolmaster would be glad to pay the rent of the land, and all the extra expense would be the expense of an agriculturist who might attend to 20 or 30 schools if not too remote. This plan would recommend the building school-houses in every district, as every landlord would be anxious to have such a model farm upon his estate. Boys would take up the new ideas much quicker than men whose prejudices were confirmed; and I should anticipate the very best possible effects from it. At all events the plan is the very cheapest mode of trying the experiment, and if found not to answer, there is nothing more to be done except discharge the agriculturists, and matters return to their former state. Should these suggestions, and those contained in the two pamphlets I have alluded to, be fully acted on, I think the pauper population in both kingdoms would be enabled to support themselves in comfort and independence, and unless they are taught how to do this the entire wealth of the empire will in the course of some time not be able to do it, in my opinion.

Veneris, 26° die Junii, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

George Lewis Smyth, Esq. called; and Examined.

G. L. Smyth, Esq.
26 June 1835.

3253. WHERE do you reside at present?—St. Paul's Terrace, Camden Town.

3254. Have you any suggestions to make with respect to any Public Works in Ireland?—Yes; I would submit, with every deference to this Committee, that very considerable benefit would be likely to arise, should you think fit to recommend a grant of public money for the purpose of improving the navigation of the River Suir; and I beg to submit that these advantages would not apply solely to the immediate neighbourhood of Carrick-on-Suir, but also to the very extensive populous section of the county of Clare and Waterford, and all the mercantile interests of the town of Clonmel. According to the common statement, Suir is navigable for sloops as far as Carrick, but in point of fact ships of a much greater burthen have gone there, and they would be enabled to go there much more frequently if this improvement was made; in fact, vessels of 300 tons burthen might load and unload at the quay at Carrick, if the bed of rocks which intersect the river a little below Carrick was blasted. This fact has had the effect of course of inducing the merchants and landed proprietors in the neighbourhood to apply to Government repeatedly on the subject; and knowing that Government some years back directed a surveyor to go to the spot, and see what could be done, I applied at the office of Public Works, hoping that I should there find a report of the surveyor, who I understood was Mr. Killaloe. Mr. Phillips, the secretary of the Board of Works, stated, however, that he had no documents of that sort, that in fact the Irish Board of Works were not in the habit of transmitting copies of any reports of the surveyors whom they had employed to this country; but he suggested that I should see Lord Duncannon, who could probably give me some information on the subject. Lord Duncannon saw me, and his Lordship's statement fully confirmed those representations that had been made to me by merchants and others interested in the subject.

3255. To what extent is the River Suir navigable at present?—At present it is navigable for sloops up to Carrick.

3256. How many miles is that?—By land it is about 33 miles from Waterford.

3257. What is the length of the river?—I cannot pretend to say; perhaps it would be about 20 miles.

3258. Can you state the probable expense of removing the obstruction to which they have alluded?—I can. It appears that Mr. Killaloe, the surveyor, estimated the expense of blasting those rocks at 1,200*l.* I should mention, as connected with the question first asked me, that though the Suir is navigable up to Carrick, and if these rocks were removed it would be navigable for vessels of 300 tons, that the commerce of Clonmel is principally managed by transmitting their goods down through large barges by Carrick from Waterford. The river is navigable for these barges at spring-tides only; but if the river was deepened in some parts, these barges,

barges, and, indeed, I believe barges of a somewhat larger tonnage, might pass at all times.

3259. To where?—From Waterford to Clonmel up and down.

3260. Now how does it happen that this obstruction, which could be removed at so small an expenditure, has not been removed long since?—The only answer I can give to that question is the answer that Government has returned to every memorial sent in, that they have no money to give.

3261. How does it happen that the people of the country, the merchants of Carrick and Waterford, have not done it themselves?—The merchants of Waterford have no interest in it.

3262. They have considerable?—But their interest is the other way; all the shipping of Carrick and Clonmel is managed at Waterford. If you give to the Carrick and Clonmel merchants facilities for shipping their goods at Carrick, that would be so much taken away from Waterford, which is what they ask at present.

3263. Then you cannot expect, of course, any assistance from the merchants of Waterford, but you might from the merchants of Carrick and Clonmel?—Yes, certainly, I should like to be allowed to state that the principal portion of the provision trade from the port of Waterford, is carried on in vessels of no greater burthen than those I have mentioned, namely, vessels of 300 tons and under.

3264. Do you mean to inform us that 1,200*l.* would be sufficient to make the river navigable from Clonmel to Carrick?—No.

3265. What would be the probable expense of effectuating that object?—The merchants of Clonmel are desirous of course of having those shallows which have been alluded to removed. They are also anxious (and they are a very business-like body of men, consisting of quakers), they are anxious that this work should be concluded in a manner permanently serviceable. Last year they sent a surveyor, for the purpose of considering how far a basin or dock might be constructed with great facility in the very neighbourhood of these rocks, which would have the effect of enabling them to make a free port of Carrick, as Government attempted to do some three or four years ago at their earnest solicitation. In the immediate neighbourhood of this bed of rocks, of which I have spoken, the turning of the river forms some islands, and these islands are passable when the tide is in by vessels of a large tonnage; in point of fact, there is almost a sort of natural dock, but they are not properly protected, so that a vessel would lie in them; and the merchants of Clonmel say, "build us brick-work or stone-work here, so as to form docks where they have been naturally hollowed out;" and they suggested this might be done for about 3,000*l.*; so that you have first, for blasting the rocks, 1,200*l.*; for forming this basin or dock there, into which the tide would flow and ebb naturally, 3,000*l.*; and I believe about 3,000*l.* for deepening the river between Carrick and Clonmel, in order to make it navigable for barges at all tides, when it is only navigable now at spring-tides; so that, altogether, about 7,000*l.* would be requisite.

3266. For so desirable an object is it not possible to have that sum raised in the county?—I know of no source by which it could possibly be raised, except by the formation of a company; if a company were formed, I do suppose the money might be got, and probably Parliament might think fit in such a case to give the company the privilege of levying some duty on the tonnage of vessels, availing themselves of these improvements.

3267. Would it be a profitable undertaking?—I have no doubt it would; a petition was forwarded from Carrick, and placed in the hands of Mr. Sheil, in order that he might present it to The House, that it might be referred to this Committee; that petition contains an estimate of the tonnage passing the river; the tonnage per annum of Clonmel and Carrick down to Waterford; and it estimates that at the charge of 6*d.* per ton, a sum would be sure to be raised sufficient to pay the interest upon the money required for this improvement, and for the purpose of forming a sinking fund to repay any advance which Government might deem proper to make to the parties undertaking this object.

3268. Can you put in that estimate?—The estimate forms part of the petition entrusted to Mr. Sheil for presentation to The House.

3269. How many tons of shipping are there?—I cannot pretend to say; the only fact I can state with respect to that is, that the exports of Carrick alone are estimated at 240,000*l.* per annum, and they were some years ago estimated at as much as 360,000*l.*; the trade therefore has fallen off, while the population has increased. The present trade of Cork and Clonmel is not exclusively the provision trade; as far as that is concerned, the quicker the goods can be passed to

G. L. Smyth, Esq.
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England of course the better. The Dutch merchant gets a better price than the Irishman, principally because he sends his goods in a fresher state; in consequence of this impediment in the navigation of the Suir, the merchants of Clonmel cannot do it as quick, because his goods have to undergo a double loading. A few years ago Lord Duncannon, at his own expense, built a quay at Fiddown, that is a few miles below Carrick-on-Suir, and the effect of that convenience to the navigation was, to bring in a single year 126 ships, with their cargoes, to Fiddown.

Martin O'Mailley, Esquire, called in; and Examined.

M. O'Mailley, Esq.

3270. WHEN in Ireland, where do you reside?—In the large Isle of Arran, on the western coast of Ireland.

3271. Are there any harbours in that island?—There is but one harbour, a tide harbour, a harbour that dries each tide; there has been a fishing-pier erected there by the order of the Board.

3272. By the Board of Works?—No; it was by order of the Fishery Board.

3273. How long ago?—It was commenced in the year 1822.

3274. Does that island stand in need of any further pier or quays being erected for the purpose of fishing?—No; not for the purpose of fishing, but for the shelter of vessels, it is wanted very much. As to that harbour, I must premise, that although the pier has been erected at a very considerable expense, there is a very narrow channel entering into it; it has deep water, but it is very narrow. There are two rocks which are under water at half flood and half ebb, which renders the passage very bad; it is so narrow that one vessel coming in and one going out, could not have room to pass each other, and in tacking or beating in there is not room; the passage would require to be widened.

3275. Could the passage be widened, and at what expense?—I have heard it said that one person offered to take the contract for 300*l.*

3276. How does it happen that it has not been done by the gentlemen, the landed proprietors of the country?—I cannot say.

3277. I believe they all belong to one gentleman?—Yes.

3278. Would it not be a great public benefit if this obstruction was removed, and this harbour made?—An infinite benefit; in the winter season vessels outward bound and inward bound to Galway come to anchor in the roadstead, which is a very wild place.

3279. Would it not be of great importance to the English trade; does it not lie in the direct line of way to America, from England and Cork?—It does not.

3280. Are not vessels frequently driven in on that shore?—Outward bound ships to the West Indies on the Liverpool trade and to America are; the Irish Channel vessels, when they clear Cape Clear stand often to the northward, and vessels when they are forced in that way do not wish to run down to Galway, which is 30 miles distant inland, and they often come to anchor in Costello Bay or in the roadstead of Arran, but Costello Bay is the much safest place.

3281. Is there a harbour at Costello?—Yes; and it is a very excellent roadstead; it is the same as if you were in a lake when you get into it.

3282. Is there a considerable distance between Arran and Costello?—The distance from anchorage to anchorage is about 12 miles.

3283. Might not a great deal of injury be done if a vessel is obliged to go 12 miles?—There is no danger between the roadstead of Arran and Costello; and she runs that distance in an open sea for the best harbour. I was going to mention that as to the necessity of clearing the passage into the pier, there is an immense bar at the entrance of the roadstead of Arran, that causes a sea which brings the vessels up to their anchors nearly, and tears away every thing; therefore, if the passage was cleared into Arran pier, vessels of 300 and 400 tons could go and lie alongside the present quay, where there is from 18 to 19 feet of water at spring-tides.

3284. Are you acquainted with the small Island of Arran?—Yes.

3285. Do you know of a lake on the south side of that small island?—I do; but it is on the east side of the island.

3286. Would it cost much to open a passage between the sea and that place?—I dare say it would; I know that I and some scientific men went to look at it; I do not exactly recollect who they were, but I have been more than once there; and I think if the lake was opened it would be the finest harbour in His Majesty's dominions. There could not be a finer harbour; the vessels would lie as safe in it as in any of the canal docks in Dublin.

3287. Now might vessels at all times reach that harbour?—Yes; it is at the mouth

mouth of the best entrance into the Bay of Galway; what is commonly called the South Sound.

3288. Can you tell us the distance between that lake and the sea?—The distance is not more than 300 or 400 yards, at an elevation of 16 or 18 feet.

3289. Do vessels from America often touch at the Isles of Arran?—Yes; the outward bound vessels.

3290. Do they seek shelter there?—Frequently I have seen them waiting for a fair wind or fine weather.

3291. If this harbour was made commodious by the removal of these rocks, would there be any difficulty for vessels to get out of the harbour at all times?—No; they could get out at all times of tide.

3292. Do you know the difference between that and the level of the sea?—I think it can be very little, because there is a subterraneous passage between the lake and the sea, for it rises with the tide a couple of feet; it rises and falls a little perceptibly, a couple of feet.

3293. Would vessels experience much difficulty in reaching this harbour from the port of Galway?—It would be much easier reached than the harbour in the large Isle of Arran.

3294. Vessels cannot leave Galway every state of wind and tide at present, but if this were cut they could do so?—Yes.

3295. How many vessels would it accommodate?—It would accommodate 500 ships of any size.

3296. This lake?—Yes; it would accommodate more ships than we could ever expect to come there.

3297. Then it would be a most convenient port in the passage to America?—Yes; the best on the western coast.

3298. Are you acquainted with the western coast of Ireland?—Not further to the southward than the Blaskets, nor further to the northward than Broadhaven. There is always from 10 to 12 fathoms of water in that lake.

3299. Are you acquainted with the passage of Ballydangan?—I am.

3300. Could not the obstructions there be easily removed?—Yes.

3301. At a very little cost?—Yes.

3302. And it would be of infinite benefit?—Yes.

3303. How do you account for its not being removed long since?—It has been talked of being removed this long time; there have been attempts to make subscriptions and putting a toll on the boats passing there.

3304. Are not lives often lost there?—There are very often lives and property both lost.

3305. Are there not from 100 to 150 boats under the necessity of making a circuitous voyage and exposing themselves to a full sea, when they might pass safely if this improvement was made?—I should say 500 boats on the average every day in the year, that is averaging the summer season; there are 50, at least, laden boats pass through that place every day in the year.

3306. At a certain state of the tide now they find it impossible to pass?—Yes, the current runs so rapidly, that the boats all congregate together above it. The laden boats come down so as to endeavour to get there by a slack tide, for if they are taken by the current, and there is not a fair wind or a stiff breeze, they lose all power of steerage, and are at the mercy of the current, are often driven on the rocks, and injured very much, lose their cargoes, and perhaps they even lose their lives.

3307. If the passage was clear, would there be a facility to the trade of Galway?—It would be of infinite benefit to the town of Galway, and to the interior of the country, as well as to the county of Clare, and Isles of Arran, in the way of manure, for it is on that part of the coast that the sea-weed is found most plentiful, and turf fuel most abundant.

3308. Would it affect the fisheries at all?—It would benefit the fishery infinitely.

3309. What are the pursuits of the inhabitants of the Isle of Arran?—They are partly agriculturists and partly fishermen.

3310. Do they ever go out into the ocean?—Yes, I have known them to go 30 or 40 miles into the main sea.

3311. Do they reach a fishing bank in that neighbourhood?—There is a bank in the neighbourhood, about 25 or 30 miles off the land, where they catch the fish called Glassing.

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3312. Turbot is taken there in great quantities?—Not as far out as that.

3313. Are their boats of sufficient size to enable them to reach this bank?—The boats are of the same description as those of the fishermen of Galway; I have gone out myself in boats of that description.

3314. Are they sufficiently large for the purpose?—I do not think they are.

3315. In the small Isle of Arran, are there any fishery piers?—None; it would be impossible to build them.

3316. Why?—In consequence of the heavy sea, except the opening of the lake.

3317. How do they manage their boats; where do they keep their boats when they have done fishing?—They have relinquished boats in the island, in consequence of the want of a harbour; they are obliged now to have recourse to a kind of canal, which they take up into the island; they had boats, but they found them very troublesome; they were obliged to haul them up on the green ground.

3318. Has the potato crop failed in the Isle of Arran last year or this?—The crop was pretty good last year; an average one, I have heard.

3319. Would the clearing of the passage of Ballydangan benefit the fisheries?—It would, inasmuch as the great herring fishery on the coast of Galway begins in the latter end of January, February and March, when the sea runs amazing high on that coast; it is a very large district where the herrings generally come in first, and a boat loaded with herrings cannot face round the headlands to go to market to Galway; a cargo of herrings are so liable to shift, they often lose a cargo, and they perish for want of salt; whereas, if this passage was opened, they could go down to Galway when they could not attempt it otherwise.

3320. That would apply to such herrings as were caught in Kilkeran Bay?—No, not at all; it would apply to the whole western district of Connemara.

3321. Do vessels experience any difficulty in leaving the port of Galway in a south-west wind?—It is a foul wind out of the bay of Galway.

3322. Can they beat out?—Yes, any vessel can beat out, and when the weather is moderate, all vessels do beat out with a south-west wind.

3323. Are there any bays in Connemara that afford shelter to large vessels navigating the bay of Galway?—Yes, a number; there is first Costello Bay, which is nearest to Galway.

3324. Is that safe for vessels of any description?—I have seen vessels of 800 tons lying there; I have seen a 22-gun ship lying there, and a West Indiaman of 700 or 800 tons. The next bay is what we call Great Man's Bay, which is not so good, because there are shoals at the entrance of it; you cannot go out at low water. These are the only bays to the eastward of Goldenhead, on the Connemara side. There is to the northward of Goldenhead a bay called Casheen, where vessels of 500 or 600 tons can ride with great safety. Higher up there is Kilkaino Bay, which is land-locked entirely, the same as a basin, and very deep water.

3325. Then you do not consider that safety harbours are required in the bay of Galway?—Nothing more than piers; there are natural safety harbours, but for the benefit of the fishery, the piers would be very requisite.

3326. Wherever there is not a natural shelter the harbours would be useful?—Yes; in the two Islands of Arran piers would be of great benefit, and in the other harbour of Costello, on the western side.

3327. Do you know Bertruckbee Bay?—I do.

3328. Is that a safe harbour?—It is a very fine harbour.

3329. Do you know Roundstown Bay?—Yes.

3330. Is that a good harbour?—Yes, and the pier on the north side would require to be finished.

3331. Do you know the place called the Straddle?—I do.

3332. Is that safe?—It would require to be cleared.

3333. Could it be cleared?—Yes, at a very trifling expense.

3334. Would that facilitate the trade of Galway?—Yes, very much.

3335. Would it cost much to clear the Straddle?—No, not a great deal.

3336. We should like to know whether there is any other suggestion you have to offer?—Nothing would benefit the whole coast of Connemara more than the coast road laid down by Mr. Nimmo; it would be of the most material benefit to the whole country.

3337. Would it be of public importance to have a safety harbour at Liskanor, in the county of Clare?—Yes, of great importance.

Mercurii, 19° die Augusti, 1835.

A. H. LYNCH, ESQUIRE, IN THE CHAIR.

R. M. O'Ferrall, Esq. a Member of the House, was Examined as follows:

R. M. O'Ferrall, Esq. M. P.

19 August 1835.

3338. YOU are a member of the grand jury of the county of Kildare, are you not?—Yes.

3339. Have you any communication to make to the Committee respecting the evidence given by Colonel Burgoyne, of the Board of Works, in Ireland, as to a useful road being stopped by the refusal of the grand jury of the county of Kildare to make a presentment?—I find at page 8 of the First Report of this Committee, under the head "As to the controlling powers of the Board of Works," an extract from the evidence of Colonel Burgoyne, Question 543; he is asked, "Can you suggest any scheme by which, when one party proposes to make a part of a general line of communication, as far as it passes through that county, that an adjoining county could be compelled to continue such line through its territory?" The answer is, "With regard to roads, the only way it could be done is, by a commission appointed by Government; Government officers and gentlemen of a different part of the country would perhaps be most satisfactory." Question 544 is, "Can you mention any instance within your own knowledge where such a provision as has been now suggested to you would be most desirable?" The answer is, "I can mention an instance where a road has been defeated for want of such a power. The Blessington turnpike trust has power to go to Carlow by a line which would be very advantageous to the country; but to carry it into execution it is necessary to pass through a small portion of the county of Kildare, whose grand jury have constantly refused to allow it, though only one shilling presentment was asked for; the consequence is, that a very improved communication from Dublin to Waterford, saving seven miles, is defeated. There is another case, where the county of Mayo has refused to carry on a great leading line of road that would be very advantageous to the country in general, and which is already perfected up to the frontiers of that county." On reading this evidence, I was convinced that Colonel Burgoyne was mistaken, and feeling that it was right to correct a statement so injurious to the character of the gentlemen of the county which I represent, I wrote to Colonel Burgoyne; the following is an extract from my letter, and from his reply to it: "As I differ with you on the facts stated in your answer to Query 544, before the Committee on Public Works, I am anxious fully to understand the extent of your meaning. The Blessington and Baltinglass trust ends at Grainy in Kildare; do you mean to convey that if it were continued by Burton Hall, between Palantine town and the present turnpike road which passes through Oak Park, *that seven miles* could be saved between Dublin and Waterford?" Colonel Burgoyne answers, "With regard to the case I quoted, having reference to the county of Kildare, I can only have a knowledge of it from reports made to me; but I still consider it one quite in point, even after your statements, which must be correct. I was certainly *in error* in mixing up with the presentment the possibility of saving by the Baltinglass line seven miles in the distance between Dublin and Waterford, because I now recollect that it does not influence that point; but in principle it is the same, as the line for which the shilling presentment has been refused, would shorten the road to Carlow by, I believe, one mile, as regards that line, and two, as compared with the old road, and, to all appearance, be a useful measure generally for the public accommodation; and although you may know of reasons why the presentment may have been properly refused, it was, as I will contend, a case for inquiry and explanation." If Colonel Burgoyne had chosen to make inquiry before he gave evidence, he would have discovered his error; and I have noticed it, from the apprehension that some persons desired to supersede the powers of grand juries, and transfer them to the Board of Works, or to give the Board of Works controlling or discretionary powers. I would most strongly deprecate any such interference, which would justly offend every proprietor and rate-payer in the country.

R. M. O'Ferrall, Esq. M. P.

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3340. Why was it the grand jury refused the presentment, by which the saving of the two miles would be gained?—The whole circumstances of this road came frequently before the grand jury of the county of Kildare; they examined the engineer of the road, and other parties interested, and they conceived that it was not desirable to carry two roads in the same direction, within a very short distance of each other, in some parts not more than a quarter of a mile, whereas the same advantage of the saving of distance could be attained by turning the Blessington line into the old road in the neighbourhood of Castledermot. I state this as also the opinion of a person deeply interested in shortening the distance; namely, that of an extensive coach proprietor, who runs coaches from Dublin to Carlow and Waterford. It was also stated before the grand jury, that the object in carrying the Blessington line in the direction alluded to by Colonel Burgoyne, was for the purpose of closing that part of the present turnpike road which passes between Colonel Bruin's lawn and deer-park. The majority of the grand jury who opposed this line was composed of gentlemen from a remote part of the county of Kildare, having no interest whatever in the matter.

3341. Have they carried the line to the bounds of the county, and does it stop there?—It does not stop at the bounds of the county.

3342. Would you give any compulsory power over grand juries in the event of one county carrying a road to the nearing of the next county?—I think it would be desirable that, on a representation being made to Government, disinterested persons should be appointed to take evidence, who should also have power to decide what portion of the expense should be imposed upon a particular county, which was not likely to derive much benefit from the line of road; but in the present case no such power was necessary; the grand jury exercised a sound discretion, and defeated what I considered to be a job.

3343. Are there any alterations in the grand jury system which you would be prepared to suggest at present?—I think the whole Act requires to be amended.

3344. What have you found to be the operation of the Act that passed the last Session, giving the Board of Works the power to repair mail-roads in certain cases?—I think it objectionable to give any such power to the Board of Works, as I am not generally aware that grand juries have so far neglected their duty as to render the continuance of such a power justifiable. The Act expires next year, and has already imposed heavy charges on counties.

3345. As the Act stands at present, it is only an alternative in case the counties neglect to repair the roads, is it not?—The Grand Jury Act, which passed two years go, is so defective in most of its provisions, that the presentments at the two last assizes, in every county with which I am acquainted, have almost invariably been informal; and that Act was passed as a temporary Act, as I am informed, merely to keep the mail-roads in repair. It was not passed to remedy the neglect of grand jurors.

3346. Have you seen statements in the evidence of Colonel Burgoyne with respect to the alleged failure of the Act that you brought in, intituled, "An Act to enable landed Proprietors to sink and embank rivers;" do you concur in the reasons which are there stated as causes of its failure?—I find Colonel Burgoyne states in his evidence, at Question 598, that it has not been acted on. I am informed that the part of the Act which gives a power to grand juries to present has been acted on. He is also asked at Question 600, "To what cause do you attribute its not being brought into operation?" He states, "I really do not know to what cause to attribute it. Mr. M. O'Ferrall himself commenced acting upon it, for the improvement of one of his own bogs; but I believe he has not as yet persevered." Colonel Burgoyne is again incorrect; the Act is not applicable in any way to the improvement of bogs. In the year 1833 I applied to the Board of Works to name an engineer to inspect a river which I thought might be improved, and a considerable quantity of land recovered from flood. Colonel Burgoyne named an engineer, who visited the river, and made me a favourable report on it. I directed him to have the levels taken, and to comply with the terms of the Act as far as he was concerned as an engineer. I was then obliged to come to England, and I heard nothing more of the engineer till I was informed that he had gone to America. On that occasion my effort to carry the Act into effect was defeated, and certainly not through any defect in the Act.

3347. To what cause do you ascribe its not having been brought into more general operation than it appears to have been?—I think the public have generally been alarmed at the liabilities of individuals; if they commenced to carry the Act into operation a considerable expense must be incurred for surveys, which would all fall upon a few persons, if the commission happened to be refused by the Lord Lieutenant.

3348. Would you see any objection to giving the Board of Public Works the power vested by this Act in the undertakers?—From what I have seen, I would be cautious in giving powers to the Board of Works, unless very strictly defined. I think it would be desirable that the Board of Works should be entrusted with giving an opinion upon works which might be beneficially undertaken, and that if the proprietors consented to carry them into effect, that then the powers of the Act should be transferred to the Board of Works, with the consent of the proprietors, but not otherwise.

3349. When you say the proprietors, you mean a certain proportion of them, two-thirds or a half, do you not?—I mean the proportion that is specified in the Act.

3350. Do you not think that any work executed by a body like the Board of Works, would be much more expensively executed than if it were done by individuals, whose ultimate profit would depend upon the economy which they observed in the execution of the works?—I did not mean that the Board of Works should have the power to conduct the works themselves; what I meant was that the Board of Works should have the power to contract with individuals to carry the work into effect, and that the security which the Act requires the proprietors to give, should then be given by the contractors, and that they should stand in the place of the proprietors.

3351. What advantage do you expect to arise from the circumstance of the Board of Works being placed in the situation of the proprietors in the execution of those works?—It is almost impossible to get country gentlemen to attend to minute details on which the success of a public work depends.

3352. If country gentlemen were to undertake a work of this kind, it would be under the direction of some engineer to direct it, would it not?—No doubt it would.

3353. Would not the Board of Works require the security from proprietors before they undertook a work, or would they not require that the profit likely to arise from the works should be so evident, that contractors would be found as well as the Board of Works, willing to undertake the execution of it?—I have already stated, I did not contemplate that the Board of Works were to be contractors, or to execute the work; I think that a board of engineers are better judges of what works are likely to be profitable than private individuals, and they are also persons better qualified to judge of contractors than any country gentlemen could be.

3354. At present, the company of undertakers have power under the Bill to borrow capital from the Board of Works, have they not?—Yes.

3355. They are obliged to give a great deal of collateral security, which perhaps throws impediments in the way of their borrowing; now supposing the landed proprietors were able to give the security of the lands themselves alone, do you not think that a considerable facility would be afforded to the bringing the Act into operation?—I think the suggestion would be much preferable to the clause in the Act. The Bill was so much opposed, both in the House of Commons and in the House of Lords, that I was obliged to adopt many provisions which I disapproved of at the time, and which experience has since convinced me are some of the greatest impediments to the successful operation of the Act.

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APPENDIX.

Appendix, No. 1.

PAPERS delivered in to the Committee by Mr. *Mahony*.

(No. 1.)

£. 100, at £. 3 per Cent. Interest, and £. 2 per Cent. Sinking Fund.

Year	£.	£. s. d.	Year	£.	£. s. d.
1st	-	5 – –	26th	50	3 10 –
2d	98	4 18 9½	27th	48	3 8 9½
3d	96	4 17 7	28th	46	3 7 7
4th	94	4 16 4¾	29th	44	3 6 4¾
5th	92	4 15 2¼	30th	42	3 5 2¼
6th	90	4 14 –	31st	40	3 4 –
7th	88	4 12 9½	32d	38	3 2 9½
8th	86	4 11 7	33d	36	3 1 7
9th	84	4 10 4¾	34th	34	3 – 4¾
10th	82	4 9 2¼	35th	32	2 19 2¼
11th	80	4 8 –	36th	30	2 18 –
12th	78	4 6 9½	37th	28	2 16 9½
13th	76	4 5 7	38th	26	2 15 7
14th	74	4 4 4¾	39th	24	2 14 4¾
15th	72	4 3 2¼	40th	22	2 13 2¼
16th	70	4 2 –	41st	20	2 12 –
17th	68	4 – 9½	42d	18	2 10 9½
18th	66	3 19 7	43d	16	2 9 7
19th	64	3 18 4¾	44th	14	2 8 4¾
20th	62	3 17 2¼	45th	12	2 7 2¼
21st	60	3 16 –	46th	10	2 6 –
22d	58	3 14 9½	47th	8	2 4 9½
23d	56	3 13 7	48th	6	2 3 7
24th	54	3 12 4¾	49th	4	2 2 4¾
25th	52	3 11 2¼	50th	2	2 1 2¼

(No. 2.)

Within how many Years will £. 100, at £. 3 per Cent. Interest, be discharged by an Annual Payment of £. 5?——Answer, 31 Years.

Year		£. s. d.	£. s. d.	Year		£. s. d.	£. s. d.
		100 – –				89 7 7	
	Interest -	3 – –			Interest -	2 13 7¾	
1st	- - -	103 – –		6th	- - -	92 1 2¾	
	Deduct -	5 – –			Deduct -	5 – –	
		98 – –	98 – –			87 1 2¾	87 1 2¾
	Interest -	2 18 9½			Interest -	2 12 2½	
2d	- - -	100 18 9½		7th	- - -	89 13 5¼	
	Deduct -	5 – –			Deduct -	5 – –	
		95 18 9½	95 18 9½			84 13 5¼	84 13 5¼
	Interest -	2 17 6½			Interest -	2 10 9¼	
3d	- - -	98 16 4		8th	- - -	87 4 2½	
	Deduct -	5 – –			Deduct -	5 – –	
		93 16 4	93 16 4			82 4 2½	82 4 2½
	Interest -	2 16 3½			Interest -	2 9 3½	
4th	- - -	96 12 7½		9th	- - -	84 13 6	
	Deduct -	5 – –			Deduct -	5 – –	
		91 12 7½	91 12 7½			79 13 6	79 13 6
	Interest -	2 14 11½			Interest -	2 7 9½	
5th	- - -	94 7 7		10th	- - -	82 1 3	
	Deduct -	5 – –			Deduct -	5 – –	
		89 7 7	89 7 7			77 1 3½	77 1 3½

(continued.)

(No. 2.)—*continued.*

Year		£.	s.	d.	£.	s.	d.
		77	1	3½			
	Interest -	2	6	2½			
11th	- - -	79	7	5¾			
	Deduct -	5	–	–			
		74	7	5¾	74	7	5¾
	Interest -	2	4	7¼			
12th	- - -	76	12	1			
	Deduct -	5	–	–			
		71	12	1	71	12	1
	Interest -	2	2	11½			
13th	- - -	73	15	–¼			
	Deduct -	5	–	–			
		68	15	–¼	68	15	–¼
	Interest -	2	1	2¾			
14th	- - -	70	16	3			
	Deduct -	5	–	–			
		65	16	3	65	16	3
	Interest -	1	19	5½			
15th	- - -	67	15	8½			
	Deduct -	5	–	–			
		62	15	8½	62	15	8½
	Interest -	1	17	7½			
16th	- - -	64	13	4			
	Deduct -	5	–	–			
		59	13	4	59	13	4
	Interest -	1	15	9¼			
17th	- - -	61	9	1¼			
	Deduct -	5	–	–			
		56	9	1¼	56	9	1¼
	Interest -	1	13	10½			
18th	- - -	58	2	11¾			
	Deduct -	5	–	–			
		53	2	11¾	53	2	11¾
	Interest -	1	11	10½			
19th	- - -	54	14	10¼			
	Deduct -	5	–	–			
		49	14	10¼	49	14	10¼
	Interest -	1	9	10			
20th	- - -	51	4	8¼			
	Deduct -	5	–	–			
		46	4	8¼	46	4	8¼
	Interest -	1	7	8¾			
		47	12	5			

Year		£.	s.	d.	£.	s.	d.
21st	- - -	47	12	5			
	Deduct -	5	–	–			
		42	12	5	42	12	5
	Interest -	1	5	6½			
22d	- - -	43	17	11½			
	Deduct -	5	–	–			
		38	17	11½	38	17	11½
	Interest -	1	3	3¾			
23d	- - -	40	1	3¼			
	Deduct -	5	–	–			
		35	1	3¼	35	1	3¼
	Interest -	1	1	–½			
24th	- - -	36	2	3¾			
	Deduct -	5	–	–			
		31	2	3¾	31	2	3¾
	Interest -	–	18	7¾			
25th	- - -	32	–	11½			
	Deduct -	5	–	–			
		27	–	11½	27	–	11½
	Interest -	–	16	2½			
26th	- - -	27	16	2			
	Deduct -	5	–	–			
		22	16	2	22	16	2
	Interest -	–	13	7¾			
27th	- - -	23	9	9¾			
	Deduct -	5	–	–			
		18	9	9¾	18	9	9¾
	Interest -	–	11	1			
28th	- - -	19	–	10¾			
	Deduct -	5	–	–			
		14	–	10¾	14	–	10¾
	Interest -	–	8	5			
29th	- - -	14	8	5¾			
	Deduct -	5	–	–			
		9	8	5¾	9	8	5¾
	Interest -	–	5	7¾			
30th	- - -	9	14	1½			
	Deduct -	5	–	–			
		4	14	1½	4	14	1½
	Interest -	–	2	9½			
31st	- - -	4	16	11	4	16	11

4.93

(No. 3.)

WITHIN how many years will £.100, at £.3 per Cent. Interest, be discharged by an Annual Payment of £.6 ?——Answer, 24 Years.

YEAR		£.	s.	d.	£.	s.	d.
		100	–	–			
	Interest -	3	–	–			
1st	- - -	103	–	–			
	Deduct -	6	–	–			
		97	–	–	97	–	–
	Interest -	2	18	2¼			
2d	- - -	99	18	2¼			
	Deduct -	6	–	–			
		93	18	2¼	93	18	2¼
	Interest -	2	16	3¾			
3d	- - -	96	14	6¼			
	Deduct -	6	–	–			
		90	14	6¼	90	14	6¼
	Interest -	2	14	5			
4th	- - -	93	8	11¼			
	Deduct -	6	–	–			
		87	8	11¼	87	8	11¼
	Interest -	2	12	5¼			
5th	- - -	90	1	4½			
	Deduct -	6	–	–			
		84	1	4½	84	1	4½
	Interest -	2	10	5¼			
6th	- - -	86	11	9¾			
	Deduct -	6	–	–			
		80	11	9¾	80	11	9¾
	Interest -	2	8	4¼			
7th	- - -	83	–	2			
	Deduct -	6	–	–			
		77	–	2	77	–	2
	Interest -	2	6	2¼			
8th	- - -	79	6	4¼			
	Deduct -	6	–	–			
		73	6	4¼	73	6	4¼
	Interest -	2	3	11½			
9th	- - -	75	10	3¾			
	Deduct -	6	–	–			
		69	10	3¾	69	10	3¾
	Interest -	2	1	8¼			
10th	- - -	71	12	–			
	Deduct -	6	–	–			
		65	12	–	65	12	–
	Interest -	1	19	4			
11th	- - -	67	11	4			
	Deduct -	6	–	–			
		61	11	4	61	11	4
	Interest -	1	16	11			
		63	8	3			

YEAR		£	s.	d.	£.	s.	d.
12th	- - -	63	8	3			
	Deduct -	6	–	–			
		57	8	3	57	8	3
	Interest -	1	14	5¼			
13th	- - -	59	2	8¼			
	Deduct -	6	–	–			
		53	2	8¼	53	2	8¼
	Interest -	1	11	10¼			
14th	- - -	54	13	6½			
	Deduct -	6	–	–			
		48	13	6½	48	13	6½
	Interest -	1	9	2			
15th	- - -	50	2	8½			
	Deduct -	6	–	–			
		44	2	8½	44	2	8½
	Interest -	1	6	5½			
16th	- - -	45	9	2			
	Deduct -	6	–	–			
		39	9	2	39	9	2
	Interest -	1	3	8½			
17th	- - -	40	12	10¼			
	Deduct -	6	–	–			
		34	12	10¼	34	12	10¼
	Interest -	1	–	9			
18th	- -	35	13	7¼			
	Deduct -	6	–	–			
		29	13	7¼	29	13	7¼
	Interest -	–	17	9¼			
19th	- - -	30	11	4½			
	Deduct -	6	–	–			
		24	11	4½	24	11	4½
	Interest -	–	14	8¾			
20th	- - -	25	6	1¼			
	Deduct -	6	–	–			
		19	6	1¼	19	6	1¼
	Interest -	–	11	6¾			
21st	- - -	19	17	8			
	Deduct -	6	–	–			
		13	17	8	13	17	8
	Interest -	–	8	3¾			
22d	- - -	14	5	11¾			
	Deduct -	6	–	–			
		8	5	11¾	8	5	11¾
	Interest -	–	4	11¼			
23d	- - -	8	10	11			
	Deduct -	6	–	–			
		2	10	11	2	10	11
	Interest -	–	1	6			
24th	- - -	2	12	5	2	12	5

(No. 4.)

WITHIN how many years will £. 100, at £. 4 per Cent. Interest, be discharged by an Annual Payment of £. 7?——Answer, 22 Years.

YEAR		£.	s.	d.	£.	s.	d.
		100	–	–			
	Interest -	4	–	–			
1st	- - -	104	–	–			
	Deduct -	7	–	–			
		97	–	–	97	–	–
	Interest -	3	17	7			
2d	- - -	100	17	7			
	Deduct -	7	–	–			
		93	17	7	93	17	7
	Interest -	3	15	–			
3d	- - -	97	12	7			
	Deduct -	7	–	–			
		90	12	7	90	12	7
	Interest -	3	12	6			
4th	- - -	94	5	1			
	Deduct -	7	–	–			
		87	5	1	87	5	1
	Interest -	3	9	9½			
5th	- - -	90	14	10½			
	Deduct -	7	–	–			
		83	14	10½	83	14	10½
	Interest -	3	7	–			
6th	- - -	87	1	10½			
	Deduct -	7	–	–			
		80	1	10½	80	1	10½
	Interest -	3	4	–¾			
7th	- - -	83	5	11¼			
	Deduct -	7	–	–			
		76	5	11½	76	5	11¼
	Interest -	3	1	–			
8th	- - -	79	6	11¼			
	Deduct -	7	–	–			
		72	6	11¼	72	6	11¼
	Interest -	2	17	10			
9th	- - -	75	4	9¼			
	Deduct -	7	–	–			
		68	4	9¼	68	4	9¼
	Interest -	2	14	7			
10th	- - -	70	19	4¼			
	Deduct -	7	–	–			
		63	19	4¼	63	19	4¼
	Interest -	2	11	2			
		66	10	6¼			

YEAR		£.	s.	d.	£.	s.	d.
11th	- - -	66	10	6¼			
	Deduct -	7	–	–			
		59	10	6¼	59	10	6¼
	Interest -	2	7	7			
12th	- - -	61	18	1¼			
	Deduct -	7	–	–			
		54	18	1¼	54	18	1¼
	Interest -	2	3	11			
13th	- - -	57	2	–¼			
	Deduct -	7	–	–			
		50	2	–¼	50	2	–¼
	Interest -	2	–	1			
14th	- - -	52	2	1¼			
	Deduct -	7	–	–			
		45	2	1¼	45	2	1¼
	Interest -	1	16	1			
15th	- - -	46	18	2¼			
	Deduct -	7	–	–			
		39	18	2¼	39	18	2¼
	Interest -	1	11	10¾			
16th	- - -	41	10	–			
	Deduct -	7	–	–			
		34	10	–	34	10	–
	Interest -	1	7	8½			
17th	- - -	35	17	8½			
	Deduct -	7	–	–			
		28	17	8½	28	17	8½
	Interest -	1	3	1¼			
18th	- - -	30	–	9¾			
	Deduct -	7	–	–			
		23	–	9¾	23	–	9¾
	Interest -	–	18	5			
19th	- - -	23	19	2¾			
	Deduct -	7	–	–			
		16	19	2¾	16	19	2¾
	Interest -	–	13	6¾			
20th	- - -	17	12	8½			
	Deduct -	7	–	–			
		10	12	8½	10	12	8½
	Interest -	–	8	6			
21st	- - -	11	1	2½			
	Deduct -	7	–	–			
		4	1	2½	4	1	2½
	Interest -	–	3	2½			
22d	- - -	4	4	5	4	4	5

(No. 5.)

WITHIN how many years will £. 100, at £. 4 per Cent. Interest, be discharged by an Annual Payment of £. 6?——Answer, 28 Years.

Year		£.	s.	d.	£.	s.	d.
		100	–	–			
	Interest	4	–	–			
1st		104	–	–			
	Deduct	6	–	–			
		98	–	–	98	–	–
	Interest	3	18	4¾			
2d		101	18	4¾			
	Deduct	6	–	–			
		95	18	4¾	95	18	4¾
	Interest	3	16	9			
3d		99	15	1¾			
	Deduct	6	–	–			
		93	15	1¾	93	15	1¾
	Interest	3	14	11¾			
4th		97	10	1½			
	Deduct	6	–	–			
		91	10	1½	91	10	1½
	Interest	3	13	2¼			
5th		95	3	3¾			
	Deduct	6	–	–			
		89	3	3¾	89	3	3¾
	Interest	3	11	3¼			
6th		92	14	7			
	Deduct	6	–	–			
		86	14	7	86	14	7
	Interest	3	9	3¼			
7th		90	3	7¼			
	Deduct	6	–	–			
		84	3	7¼	84	3	7¼
	Interest	3	7	3½			
8th		87	10	10¾			
	Deduct	6	–	–			
		81	10	10¾	81	10	10¾
	Interest	3	5	2¾			
9th		84	16	1½			
	Deduct	6	–	–			
		78	16	1½	78	16	1½
	Interest	3	3	–			
10th		81	19	1½			
	Deduct	6	–	–			
		75	19	1½	75	19	1½
	Interest	3	–	9¼			
11th		78	19	10¾			
	Deduct	6	–	–			
		72	19	10¾	72	19	10¾
	Interest	2	18	4½			
		75	18	3¼			

Year		£.	s.	d.	£.	s.	d.
12th		75	18	3¼			
	Deduct	6	–	–			
		69	18	3¼	69	18	3¼
	Interest	2	15	10½			
13th		72	14	1¾			
	Deduct	6	–	–			
		66	14	1¾	66	14	1¾
	Interest	2	13	4½			
14th		69	7	6¼			
	Deduct	6	–	–			
		63	7	6¼	63	7	6¼
	Interest	2	10	8¼			
15th		65	18	2½			
	Deduct	6	–	–			
		59	18	2½	59	18	2½
	Interest	2	7	11			
16th		62	6	1½			
	Deduct	6	–	–			
		56	6	1½	56	6	1½
	Interest	2	5	–½			
17th		58	11	2			
	Deduct	6	–	–			
		52	11	2	52	11	2
	Interest	2	2	–			
18th		54	13	2			
	Deduct	6	–	–			
		48	13	2	48	13	2
	Interest	1	18	10¾			
19th		50	12	–¾			
	Deduct	6	–	–			
		44	12	–¾	44	12	–¾
	Interest	1	15	8			
20th		46	7	8¾			
	Deduct	6	–	–			
		40	7	8¾	40	7	8¾
	Interest	1	12	3½			
21st		41	19	11¼			
	Deduct	6	–	–			
		35	19	11¼	35	19	11¼
	Interest	1	8	9½			
22d		37	8	8¾			
	Deduct	6	–	–			
		31	8	8¾	31	8	8¾
	Interest	1	5	1¾			
23d		32	13	10½			
	Deduct	6	–	–			
		26	13	10½	26	13	10½
	Interest	1	1	4¾			
		27	14	3¼			

(No. 5.)—*continued.*

Year		£. s. d.	£. s. d.
24th	- - -	27 14 3½	
	Deduct -	6 – –	
		21 14 3½	21 14 3½
	Interest -	– 17 4½	
25th	- - -	22 11 7¾	
	Deduct -	6 – –	
		16 11 7¾	16 11 7¾
	Interest -	– 13 2½	
26th	- - -	17 4 10¼	
	Deduct -	6 – –	
		11 4 10¼	
	Interest -	– 8 11¾	
		11 4 10¼	11 4 10¼
27th	- - -	11 13 10	11 13 10
	Deduct -	6 – –	
		5 11 10	5 11 10
	Interest -	– 4 5¼	
28th	- - -	5 16 3¼	5 16 3¼

(No. 6.)

WITHIN how many years will £.100, at 5 per Cent. Interest, be discharged by an Annual Payment of £.9?——Answer, 17 years.

Year		£. s. d.	£. s. d.
		100 – –	
	Interest -	5 – –	
1st	- - -	105 – –	
	Deduct -	9 – –	
		96 – –	96 – –
	Interest -	4 16 –	
2d	- - -	100 16 –	
	Deduct -	9 – –	
		91 16 –	91 16 –
	Interest -	4 11 9	
3d	- - -	96 7 9	
	Deduct -	9 – –	
		87 7 9	87 7 9
	Interest -	4 7 4½	
	- -	91 15 1½	
	Deduct -	9 – –	
		82 15 1½	82 15 1½
	Interest -	4 2 9	
5th	- - -	86 17 11½	
	Deduct -	9 – –	
		77 17 11½	77 17 11½
	Interest -	3 17 10½	
6th	- - -	81 15 10	
	Deduct -	9 – –	
		72 15 10	72 15 10
	Interest -	3 12 9¼	
7th	- - -	76 8 7¼	
	Deduct -	9 – –	
		67 8 7¼	67 8 7¼
	Interest -	3 7 5	
8th	- - -	70 16 –¼	
	Deduct -	7 – –	
		63 16 –¼	63 16 –¼
	Interest -	3 3 9½	
		66 19 9¾	
9th	- - -	66 19 9¾	
	Deduct -	9 – –	
		57 19 9¾	57 19 9¾
	Interest -	2 18 –	
10th	- - -	60 17 9¾	
	Deduct -	9 – –	
		51 17 9¾	51 17 9¾
	Interest -	2 11 10½	
11th	- - -	54 9 8¼	
	Deduct -	9 – –	
		45 9 8¼	45 9 8¼
	Interest -	2 5 6	
12th	- - -	47 15 2¼	
	Deduct -	9 – –	
		38 15 2¼	38 15 2¼
	Interest -	1 18 9	
13th	- - -	40 13 11¼	
	Deduct -	9 – –	
		31 13 11¼	31 13 11¼
	Interest -	1 11 8	
14th	- - -	33 5 7¼	
	Deduct -	9 – –	
		24 5 7¼	24 5 7¼
	Interest -	1 4 3¾	
15th	- - -	25 9 10	
	Deduct -	9 – –	
		16 9 10	16 9 10
	Interest -	– 16 6	
16th	- - -	17 6 4	
	Deduct -	9 – –	
		8 6 4	8 6 4
	Interest -	– 8 4	
17th	- - -	8 14 8	8 14 8

(No. 7.)

WITHIN how many Years will £.100, at 6 per Cent. Interest, be discharged by an Annual Payment of £.10.——Answer, 16 Years.

YEAR		£.	s.	d.	£.	s.	d.
		100	–	–			
	Interest -	6	–	–			
1st	- - -	106	–	–			
	Deduct -	10	–	–			
		96	–	–	96	–	–
	Interest -	5	15	2			
2d	- - -	101	15	2			
	Deduct -	10	–	–			
		91	15	2	91	15	2
	Interest -	5	10	– ½			
3d	- - -	97	5	2 ½			
	Deduct -	10	–	–			
		87	5	2 ½	87	5	2 ½
	Interest -	5	4	8			
4th	- - -	92	9	10 ½			
	Deduct -	10	–	–			
		82	9	10 ½	82	9	10 ½
	Interest -	4	18	11 ½			
5th	- - -	87	8	10			
	Deduct -	10	–	–			
		77	8	10	77	8	10
	Interest -	4	12	10 ½			
6th	- - -	82	1	8 ½			
	Deduct -	10	–	–			
		72	1	8 ½	72	1	8 ½
	Interest -	4	6	5			
7th	- - -	76	8	1 ½			
	Deduct -	10	–	–			
		66	8	1 ½	66	8	1 ½
	Interest -	3	19	8			
8th	- - -	70	7	9 ½			
	Deduct -	10	–	–			
		60	7	9 ½	60	7	9 ½
	Interest -	3	12	6			
		64	–	3 ½			

YEAR		£.	s.	d.	£.	s.	d.
9th	- - -	64	–	3 ½			
	Deduct -	10	–	–			
		54	–	3 ½	54	–	3 ½
	Interest -	3	4	9 ½			
10th	- - -	57	5	1			
	Deduct -	10	–	–			
		47	5	1	47	5	1
	Interest -	2	16	8			
11th	- - -	50	1	9			
	Deduct -	10	–	–			
		40	1	9	40	1	9
	Interest -	2	8	1			
12th	- - -	42	9	10			
	Deduct -	10	–	–			
		32	9	10	32	9	10
	Interest -	1	18	11 ½			
13th	- - -	34	8	9 ½			
	Deduct -	10	–	–			
		24	8	9 ½	24	8	9 ½
	Interest -	1	9	4 ½			
14th	- - -	25	18	2			
	Deduct -	10	–	–			
		15	18	2	15	18	2
	Interest -	–	19	1			
15th	- - -	16	17	3			
	Deduct -	10	–	–			
		6	17	3	6	17	3
	Interest -	–	8	– ½			
16th	- - -	7	5	3 ½			

(No. 8.)

£.100 at 3 per Cent. Interest, and 3 per Cent. Sinking Fund.

YEAR	£.	£.	s.	d.	YEAR	£.	£.	s.	d.	YEAR	£.	£.	s.	d.
1st	- 100	- -	6	–	–	13th	- 64	- -	4	18	4 ¾	24th	- 31	- -	3	18	7
2d	- 97	- -	5	18	2 ¼	14th	- 61	- -	4	16	7	25th	- 28	- -	3	16	9 ½
3d	- 94	- -	5	16	4 ¾	15th	- 58	- -	4	14	9 ½	26th	- 25	- -	3	15	–
4th	- 91	- -	5	14	7	16th	- 55	- -	4	13	–	27th	- 22	- -	3	13	2 ¼
5th	- 88	- -	5	12	9 ½	17th	- 52	- -	4	11	2 ¼	28th	- 19	- -	3	11	4 ¾
6th	- 85	- -	5	11	–	18th	- 49	- -	4	9	4 ¾	29th	- 16	- -	3	9	7
7th	- 82	- -	5	9	2 ¼	19th	- 46	- -	4	7	7	30th	- 13	- -	3	7	9 ½
8th	- 79	- -	5	7	4 ¾	20th	- 43	- -	4	5	9 ½	31st	- 10	- -	3	6	–
9th	- 76	- -	5	5	7	21st	- 40	- -	4	4	–	32d	- 7	- -	3	4	2 ¼
10th	- 73	- -	5	3	9 ½	22d	- 37	- -	4	2	2 ¼	33d	- 4	- -	3	2	4 ¾
11th	- 70	- -	5	2	–	23d	- 34	- -	4	–	4 ¾	34th	- 1	- -	1	–	7
12th	- 67	- -	5	–	2 ¼												

(No. 9.)

£. 100 at 5 per Cent. Interest, and 9 per Cent. Sinking Fund.

Year	£.	£.	s.	d.	Year	£.	£.	s.	d.	Year	£.	£.	s.	d.
1st	100	14	–	–	5th	64	12	4	–	9th	28	10	8	–
2d	91	13	11	–	6th	55	11	15	–	10th	19	9	19	–
3d	82	13	2	–	7th	46	11	6	–	11th	10	9	10	–
4th	73	12	13	–	8th	37	10	17	–					

(No. 10.)

£. 100 at 6 per Cent. Interest, and 10 per Cent. Sinking Fund.

Year	£.	£.	s.	d.	Year	£.	£.	s.	d.	Year	£.	£.	s.	d.
1st	100	16	–	–	5th	60	13	12	–	8th	30	11	16	–
2d	90	15	8	–	6th	50	13	–	–	9th	20	11	4	–
3d	80	14	16	–	7th	40	12	8	–	10th	10	10	12	–
4th	70	14	4	–										

(No. 11.)

£. 100 at 4 per Cent. Interest, and 6 per Cent. Sinking Fund.

Year	£.	£.	s.	d.	Year	£.	£.	s.	d.	Year	£.	£.	s.	d.
1st	100	10	–	–	7th	64	8	11	2 ¼	13th	28	7	2	4 ¾
2d	94	9	15	2 ¼	8th	58	8	6	4 ¾	14th	22	6	17	7
3d	88	9	10	4 ¾	9th	52	8	1	7	15th	16	6	12	9 ½
4th	82	9	5	7	10th	46	7	16	9 ½	16th	10	6	8	–
5th	76	9	–	9 ½	11th	40	7	12	–	17th	4	4	3	2 ¼
6th	70	8	16	–	12th	34	7	7	2 ¼					

(No. 12.)

£. 100 at 4 per Cent. Interest, and 7 per Cent. Sinking Fund.

Year	£.	£.	s.	d.	Year	£.	£.	s.	d.	Year	£.	£.	s.	d.
1st	100	11	–	–	6th	65	9	12	–	11th	30	8	4	–
2d	93	10	14	4 ¾	7th	58	9	6	4 ¾	12th	23	7	18	4 ¾
3d	86	10	8	9 ½	8th	51	9	–	9 ½	13th	16	7	12	9 ½
4th	79	10	3	2 ¼	9th	44	8	15	2 ¼	14th	9	7	7	2 ¼
5th	72	9	17	7	10th	37	8	9	7	15th	2	2	1	7

(No. 13.)

£. 100 at 5 per Cent. Interest, and 4 per Cent. Sinking Fund.

Year	£.	£.	s.	d.	Year	£.	£.	s.	d.	Year	£.	£.	s.	d.
1st	100	9	–	–	10th	64	7	4	–	18th	32	5	12	–
2d	96	8	16	–	11th	60	7	–	–	19th	28	5	8	–
3d	92	8	12	–	12th	56	6	16	–	20th	24	5	4	–
4th	88	8	8	–	13th	52	6	12	–	21st	20	5	–	–
5th	84	8	4	–	14th	48	6	8	–	22d	16	4	16	–
6th	80	8	–	–	15th	44	6	4	–	23d	12	4	12	–
7th	76	7	16	–	16th	40	6	–	–	24th	8	4	8	–
8th	72	7	12	–	17th	36	5	16	–	25th	4	4	4	–
9th	68	7	8	–										

(No. 14.)

£. 100 at 6 per Cent. Interest, and 4 per Cent. Sinking Fund.

Year	£.	£.	s.	d.	Year	£.	£.	s.	d.	Year	£.	£.	s.	d.
1st	100	10	–	–	10th	64	7	16	9 ½	18th	32	5	18	4 ½
2d	96	9	15	2	11th	60	7	12	–	19th	28	5	13	7
3d	92	9	10	4 ½	12th	56	7	7	2	20th	24	5	8	9 ½
4th	88	9	5	7	13th	52	7	2	4 ½	21st	20	5	4	–
5th	84	9	–	9 ½	14th	48	6	17	7	22d	16	4	19	2
6th	80	8	16	–	15th	44	6	12	9 ½	23d	12	4	14	4 ½
7th	76	8	11	2	16th	40	6	8	–	24th	8	4	9	7
8th	72	8	6	4 ½	17th	36	6	3	2	25th	4	4	4	9 ½
9th	68	8	1	7										

(No. 15.)

£. 100 at 4 per Cent. Interest, and 2 per Cent. Sinking Fund.

Year	£.	£.	s.	d.
1st	100	6	–	–
2d	98	5	18	4 3/4
3d	96	5	16	9 1/2
4th	94	5	15	2 1/4
5th	92	5	13	7
6th	90	5	12	–
7th	88	5	10	4 3/4
8th	86	5	8	9 1/2
9th	84	5	7	2 1/4
10th	82	5	5	7
11th	80	5	4	–
12th	78	5	2	4 3/4
13th	76	5	–	9 1/2
14th	74	4	19	2 1/4
15th	72	4	17	7
16th	70	4	16	–
17th	68	4	14	4 3/4
18th	66	4	12	9 1/2
19th	64	4	11	2 1/4
20th	62	4	9	7
21st	60	4	8	–
22d	58	4	6	4 3/4
23d	56	4	4	9 1/2
24th	54	4	3	2 1/4
25th	52	4	1	7
26th	50	4	–	–
27th	48	3	18	4 3/4
28th	46	3	16	9 1/2
29th	44	3	15	2 1/4
30th	42	3	13	7
31st	40	3	12	–
32d	38	3	10	4 3/4
33d	36	3	8	9 1/2
34th	34	3	7	2 1/4
35th	32	3	5	7
36th	30	3	4	–
37th	28	3	2	4 3/4
38th	26	3	–	9 1/2
39th	24	2	19	2 1/4
40th	22	2	17	7
41st	20	2	16	–
42d	18	2	14	4 3/4
43d	16	12		9 1/2
44th	14	2	11	2 1/4
45th	12	2	9	7
46th	10	2	8	–
47th	8	2	6	4 3/4
48th	6	2	4	9 1/2
49th	4	2	3	2 1/4
50th	2	2	1	7

(No. 16.)

£. 100 at 3 per Cent. Interest, and 5 per Cent. Sinking Fund.

Year	£.	£.	s.	d.
1st	100	8	–	–
2d	95	7	17	–
3d	90	7	14	–
4th	85	7	11	–
5th	80	7	8	–
6th	75	7	5	–
7th	70	7	2	–
8th	65	6	19	–
9th	60	6	16	–
10th	55	6	13	–
11th	50	6	10	–
12th	45	6	7	–
13th	40	6	4	–
14th	35	6	1	–
15th	30	5	18	–
16th	25	5	15	–
17th	20	5	12	–
18th	15	5	9	–
19th	10	5	6	–
20th	5	5	3	–

(No. 17.)

£. 100 at 3 per Cent. Interest, and 6 per Cent. Sinking Fund.

Year	£.	£.	s.	d.
1st	100	9	–	–
2d	94	8	16	4 3/4
3d	88	8	12	9 1/2
4th	82	8	9	2 1/4
5th	76	8	5	7
6th	70	8	2	–
7th	64	7	18	4 3/4
8th	58	7	14	9 1/2
9th	52	7	11	2 1/4
10th	46	7	7	7
11th	40	7	4	–
12th	34	7	–	4 3/4
13th	28	6	16	9 1/2
14th	22	6	13	2 1/4
15th	16	6	9	7
16th	10	6	6	–
17th	4	4	2	4 3/4

(No. 18.)

£. 100 at 4 per Cent. Interest, and 3 per Cent. Sinking Fund.

Year	£.	£.	s.	d.
1st	100	7	–	–
2d	97	6	17	7
3d	94	6	15	2 1/4
4th	91	6	12	9 1/2
5th	88	6	10	4 3/4
6th	85	6	8	–
7th	82	6	5	7
8th	79	6	3	2 1/4
9th	76	6	–	9 1/2
10th	73	5	18	4 3/4
11th	70	5	16	–
12th	67	5	13	7
13th	64	5	11	2 1/4
14th	61	5	8	9 1/2
15th	58	5	6	4 3/4
16th	55	5	4	–
17th	52	5	1	7
18th	49	4	19	2 1/4
19th	46	4	16	9 1/2
20th	43	4	14	4 3/4
21st	40	4	12	–
22d	37	4	9	7
23d	34	4	7	2 1/4
24th	31	4	4	9 1/2
25th	28	4	2	4 3/4
26th	25	4	–	–
27th	22	3	17	7
28th	19	3	15	2 1/4
29th	16	3	12	9 1/2
30th	13	3	10	4 3/4
31st	10	3	8	–
32d	7	3	5	7
33d	4	3	3	2 1/4
34th	1	1	–	9 1/2

Appendix, No. 2.

PAPERS delivered in to the Committee by Colonel *John Fox Burgoyne*.

(No. 1.)

STATEMENT of the several LOANS made by the COMMISSIONERS of PUBLIC WORKS in *Ireland*, pursuant to the Provisions of the Act 1 & 2 WILL. IV. c. 33, up to the 1st of January 1835.

No.	OBJECT.	Amount of LOAN sanctioned.	Amount of Exchequer Bills issued on account of each.	REPAYMENTS.	
				PRINCIPAL.	INTEREST.
		£. s. d.	£. s. d.	£. s. d.	£. s. d.
1	Road from Drumsna to Bundoran, county Leitrim	2,511 17 5	2,500 – –	402 12 4	266 5 2
2	Road from Kilkenny to Freshford, co. Kilkenny	623 – –	600 – –	176 12 9	56 19 9
3	Completing the Works of Ardglass Harbour -	6,650 – –	6,650 – –	—	—
4	Working of the Quarries at Valentia - -	7,000 – –	7,000 – –	- - -	230 – 8
5	To improve the Works of the Limerick Navigation Company - - - - - - -	8,910 – –	8,500 – –	- - -	661 4 3
6	Ennis Road, through the liberties of the city of Limerick - - - - - - -	205 – –	200 – –	110 16 8	17 5 10
7	Waterford Road - - - ditto - - -	560 – –	560 – –	302 17 9	47 2 3
8	Drainage of farms near Nenagh, county Tipperary	200 – –	200 – –	- - -	15 – –
9	Erecting Machinery, Cronebane Copper Mines, county Wicklow - - - - -	1,000 – –	1,000 – –	484 11 5	85 10 2
10	In aid of Machinery, Ballymurtagh Mine - ditto	1,000 – –	1,000 – –	- - -	59 1 11
11	Road from Clogheen to Cappoquin, county Tipperary - - - - - - -	1,278 11 10	1,250 – –	434 17 1	44 12 2
12	- - Ditto - - - - - county Waterford	1,895 12 7	1,850 – –	1,004 8 7	39 10 9
13	Building a Court-house at Carlow - - -	5,000 – –	5,000 – –	2,184 5 4	315 14 8
14	Continuing Quay-wall at Claddagh, Galway -	300 – –	250 – –	61 6 2	10 13 10
15	Completing the Wellesley Bridge and Docks, Limerick - - - - - - -	25,000 – –	19,300 – –	1,250 – –	658 14 10
16	Road from Strokestown to Lung Bridge, county Roscommon - - - - - - -	7,111 8 11	4,650 – –	2,069 5 2	64 3 6
17	Slate Quarries near Killaloe - - - -	500 – –	500 – –	- - -	26 19 6
18	Athlunkard Bridge, and Approaches thereto, over the river Shannon - - - - -	9,889 19 2	9,850 – –	- - -	152 17 4
19	—	—	—	—	—
20	Constructing a Floating Dock at Galway - -	17,000 – –	4,000 – –	636 5 7	212 11 10
21	Road between Castlereagh and Ballinasloe, near Ballygar, county Galway - - - - -	346 8 3	300 – –	94 17 4	10 2 8
22	Road between Ennis and Ballinasloe, near Lough Graney, county Clare - - - - - -	1,153 1 7	800 – –	465 18 6	9 4 1
23	Road, continuation of same to Derrybrien, county Galway - - - - - - - -	534 4 2	500 – –	221 3 7	4 4 5
24	Bridge over the Bann at Agivey, county Londonderry - - - - - - - - -	1,250 – –	1,250 – –	162 3 9	25 6 3
25	Ditto - - - ditto - - county Antrim -	1,250 – –	1,250 – –	340 16 7	24 15 11
26	Road from Larne to Ballycastle, county Antrim	11,303 4 –	9,000 – –	2,699 12 1	83 16 –
27	Road from Carrickfergus to Antrim and Larne -	1,485 1 8	—	—	—
28	To improve the Newry Navigation - - -	12,000 – –	8,000 – –	489 14 10	150 18 8
29	Drainage of Farms, Earl of Besborough, county Kilkenny - - - - - - - -	2,000 – –	1,150 – –	—	—
30	Road from Dublin to Blessington - - -	3,500 – –	2,750 – –	175 – –	29 3 8
31	Railway from Dublin to Kingstown - -	75,000 – –	74,000 – –	—	—
32	To improve the Harbour of Drogheda - -	10,000 – –	4,000 – –	—	—
33	Road from Loughrea to Derrybrien, co. Galway	720 – –	400 – –	200 4 7	2 5 5
34	Completing Repairs of Road leading to Waterford through Limerick - - - - -	296 3 6	290 – –	133 10 5	14 11 3
35	Ditto - - - Ennis - - ditto - -	117 6 8	100 – –	54 7 6	4 10 10
36	Road from Abbeyfeale to Glin, county Limerick	1,181 15 3	700 – –	305 6 4	1 18 9
37	Bridge over the river Inagh, near Liscannor, county Clare - - - - - - -	2,222 14 –	1,200 – –	901 16 11	15 4 1
38	Road from Kenmare to Glengarriff, county Cork	2,737 16 –	1,250 – –	992 16 3	13 6 8
39	Same Road - - - county Kerry - -	5,865 18 –	2,750 – –	2,445 15 3	17 18 6
40	Road from Five-mile Town to Clones, county Fermanagh - - - - - - -	2,600 – –	1,500 – –	260 9 6	—
41	Road near Meelick to Cratloe Hill, county Clare	1,250 – –	1,200 – –	258 17 5	27 2 7
42	Road from Portumna to Mount Shannon, county Galway - - - - - - - - -	2,178 – –	900 – –	424 16 1	4 12 4
43	Road from Omagh to Cookstown, county Tyrone	2,334 – –	2,050 – –	172 14 –	2 8 2
44	Road from Balieborough to Virginia, county Cavan - - - - - - - -	1,936 – –	200 – –	—	—
45	Road from Centinaveena Coal-pits to Dromahair, county Leitrim - - - - - - -	1,943 – –	500 – –	278 9 1	12 18 11

N.	OBJECT.	Amount of LOAN sanctioned.	Amount of Exchequer Bills issued on account of each.	REPAYMENTS. PRINCIPAL.	REPAYMENTS. INTEREST.
		£. s. d.	£. s. d.	£. s. d.	£. s. d.
46	To complete a Roman Catholic Chapel at Bruree, county Limerick	150 – –	150 – –	—	—
47	Road through liberty of Waterford, and part of road to Tramore	1,550 – –	600 – –	477 – 6	—
48	For Improvements to the Harbour of Ballyshannon, county Donegal	5,000 – –	—	—	—
49	Road from Johnstown to Bawn, county Kilkenny	182 – –	150 – –	11 2 6	2 10 6
50	Road from Killaloe to Tomgraney, county Clare	2,850 – –	350 – –	—	—
51	To complete a Roman Catholic Chapel at Buttevant, county Cork	600 – –	—	—	—
52	Road from Derrygonnelly to Manorhamilton, county Fermanagh	2,350 – –	—	—	—
53	Turnpike Road between Dublin and Mullingar	3,000 – –	1,500 – –	—	—
54	Road from Kilkenny to Piltown, county Kilkenny	1,050 – –	350 – –	46 2 7	5 6 5
55	Road over Cratloe Hill to Moyhill, county Clare	1,700 – –	—	—	—
56	Road from near Ross to Borris, county Wexford	2,800 – –	—	—	—
57	Boyne Navigation from Carrickdexter Lock to Drogheda	1,750 – –	500 – –	—	—
58	Road from Mallins to Gindore River, county Donegal	750 – –	750 – –	66 5 5	8 14 7
59	New Bridge at Belturbet, county Cavan	1,700 – –	—	—	—
60	Road from Carnew to Tullow, county Wicklow	2,000 – –	—	—	—
61	For rebuilding Thomond Bridge, city of Limerick	9,000 – –	—	—	—
62	Improvement in Turnpike Road from Dublin to Dunleer	1,600 – –	—	—	—
63	Road from Bailieborough by Moynalty to Kells, county Cavan	898 15 –	—	—	—
64	For clearing away a mass of very bad Buildings in Barrack-street, for an improved entrance to the city of Dublin - - Wide-Street Commissioners	25,000 – –	—	—	—
65	The Ecclesiastical Commissioners, pursuant to Act 4 & 5 Will. 4, c. 90	46,000 – –	—	—	—
	£.	351,770 18 –	195,250 – –	20,796 19 10	3,435 9 1

(No. 2.)

STATEMENT of LOANS and GRANTS made by the BOARD of PUBLIC WORKS, pursuant to the Act of the 1 & 2 WILL. IV. c. 33, classed in the order of the Description of Works for which they were advanced, including those approved, but not definitively sanctioned.

No.	OBJECTS.	Aggregates.
	LOANS:	£. s. d.
39	Roads	79,698 4 10
8	Bridges	49,412 13 2
4	Navigations	29,160 – –
9	Harbours and Quays	111,950 – –
2	Railways	80,000 – –
3	Quarries and Culm-pit	9,500 – –
2	Mines (Machinery)	2,000 – –
2	Drainage	2,200 – –
1	Court House	5,000 – –
1	Hospital	2,500 – –
2	Chapels (completing)	750 – –
1	Dublin Wide-Streets	25,000 – –
1	Ecclesiastical Commissioners	100,000 – –
	£.	497,170 18 –
	GRANTS:	
17	Roads	30,067 12 2
1	Bridge	2,222 14 –
2	Piers and Quay	418 – –
	£.	32,708 6 2

Office of Public Works, 27 April 1835.

Henry R. Paine, Secy

(No. 3.)

STATEMENT of Loans made by the Commissioners of Public Works, *Ireland*, showing the Amount paid to Engineers for Preliminary Investigations, Surveys, Inspections, &c., by Parties making application for Loan or Grant; ended 31 December 1834.

N° of Loan.	AMOUNT. £.	s.	d.	PURPOSE.	Name of Engineer employed.	Amount of Expenses Paid. £.	s.	d.
1	2,511	17	5	Road Drumsna to Bundoran	John Kelly	14	2	4
2	623	–	–	– Kilkenny to Freshford.	—	—		
3	6,650	–	–	Harbour at Ardglass.	—	—		
4	7,000	–	–	Slate Quarries at Valentia	H. H. Killaly	27	2	6
5	8,910	–	–	Limerick Navigation.	—	—		
6	205	–	–	Road to Ennis, Liberties of Limerick	E. Russell	6	2	6
7	560	–	–	– to Waterford - ditto				
8	200	–	–	James O'Gorman.	—	—		
9	1,000	–	–	Copper Mine, County Wicklow	Samson Carter	10	–	–
10	1,000	–	–	Richard Johnston, for Machinery.	—	—		
11	1,278	11	10	Road Clogheen to Cappoquin	Late John Killaly, as Engineer to Board.	—		
12	1,895	12	7	– – Same				
13	5,000	–	–	Court-house at Carlow	J. Owen.	—		
14	300	–	–	Quay-walls at Claddagh	H. H. Killaly	—		
15	25,000	–	–	Wellesley Bridge and Docks	Thomas Rhodes	87	–	–
16	7,111	8	11	Road Strokestown to Lung Bridge	E. Russell	11	3	11
17	500	–	–	John Salmon, Slate Quarries.	—	—		
18	9,889	19	2	Bridge at Athlunkard	Thomas Rhodes	25	–	–
19	100	–	–	Roman Catholic Chapel.	—	—		
20	17,000	–	–	Floating Docks, Galway	H. H. Killaly.	—		
21	346	8	3	Ballygar Road	H. H. Killaly	8	14	6
22	1,153	1	7	Loughgraney Road, County Clare	J. Grantham	14	5	6
23	534	4	2	Derrybrien Road, County Galway				
24	11,303	4	–	– Same – to Ballycastle Road	William Bald	100	–	–
25	1,250	–	–	Bridge over the Bann at Agivey, Antrim	William Bald	32	18	8
26	1,250	–	–	and Derry				
27	1,485	1	8	Road, Carrickfergus to Antrim	William Armstrong	50	–	–
28	12,000	–	–	Newry Navigation	George Halpin	16	4	5
29	2,000	–	–	Drainage of Farms, Earl Besborough.	—	—		
30	3,500	–	–	Road, Dublin to Blessington	Jacob Owen	4	6	–
31	75,000	–	–	Railway, Dublin to Kingstown.	—	—		
32	10,000	–	–	Harbour at Drogheda	William Bald	25	16	–
33	720	–	–	Road, Loughrea to Derrybrien (*see* Loughgraney; continuation of Nos. 22 and 23.)				
34	296	3	6	– leading to Waterford from Limerick	Same as Nos. 6 and 7.			
35	117	6	8	– leading to Ennis from Limerick				
36	2,222	14	–	Bridge at Liscannor	George Halpin and Jacob Owen	18	–	–
						21	5	–
37	1,181	15	3	Road, Abbeyfeale to Glin	R. Robinson	5	1	4
38	2,737	16	–	– Kenmare to Glengariffe	William Bald	80	–	–
39	5,865	18	–	– – Same				
40	2,600	–	–	– Five-mile Town to Clones	Vignolles & Carter	49	16	2
41	1,250	–	–	– near Meelick, Cratloe Hill	Not yet paid.	—		
42	2,178	–	–	– Portumna to Mount Shannon	H. H. Killaly	31	2	–
43	2,334	–	–	– Omagh to Cookstown	John Richardson	5	8	3
44	1,936	–	–	– Balieborough to Virginia	Vignolles & Carter	39	8	11
45	1,943	–	–	– Centinaveena to Dromahair	H. H. Killaly	28	10	6
						25	15	6
46	150	–	–	Roman Catholic Chapel, County Limerick.	—	—		
47	1,550	–	–	Road, Waterford to Tramore	Samson Carter	6	17	–
48	5,000	–	–	Harbour of Ballyshannon	Jacob Owen	15	2	–
49	182	–	–	Road, Johnstown to Bawn	Bart. Ellis	5	2	10
50	2,850	–	–	– Killaloe to Tomgraney	William Hampton	29	15	6
51	600	–	–	Roman Catholic Chapel at Buttevant, County Cork.		—		
52	2,350	–	–	Road, Derrygonnelly to Manorhamilton	George Halpin, jun.	16	2	–
53	3,000	–	–	– Dublin to Mullingar	Jacob Owen	29	13	6
54	1,050	–	–	– Kilkenny to Piltown	R. D. Gibbons	4	5	4
55	1,700	–	–	– Cratloe Hill to Moy Hill, County Clare.	—	—		
56	2,300	–	–	– New Ross to Ballyane	R. Beamish	9	12	6
57	1,750	–	–	Boyne Navigation	H. H. Killaly.	—		
58	750	–	–	Road, Mallins to Gindore	John Richardson	10	17	8
59	1,700	–	–	Bridge at Belturbet	John Fraser	8	8	–
60	2,000	–	–	Road, Carnew to Tullow	C. G. Forth	18	–	6
61	9,000	–	–	Bridge (Thomond) Limerick	Jacob Owen	24	3	6
62	1,600	–	–	Road, Dublin to Dunleer	Charles Lanyon	3	–	6
63	898	15	–	– Bailieborough to Moynalty, by Kells	F. Dubourdieu	35	–	–
64	25,000	–	–	Dublin Wide-Street Commissioners.	—	—		
65	46,000	–	–	Ecclesiastical Commissioners	Under Special Act of Parliament.			
				STATEMENT of Grants:				
1	218	18	–	Fishery Pier at Rathcourcey	B. D. Gibbons	8	3	6
4	635	15	4	Road and Pier, Garrakennedy.	—	—		
13	700	–	–	– Glenstal Mountains	R. Robinson	6	5	6
18	2,340	2	6	– Donegal to Pettigo	John Stedman	72	9	–
£.	355,765	13	10		£.	1,040	2	10

27 April 1835. *Jos. C. Walker*, Account', O. P.W.

N.B.—The object of the Commissioners has been always to reduce, as much as possible, the expenses of the parties making applications for Loans; and many opportunities have enabled them to dispense with any charge for Engineers' investigations. On some occasions previous full Reports and Surveys had been made by Engineers of character on the same object, without relation to the Loan sought for; on others the work had been previously in progress with other funds, and the circumstances were well known to the Commissioners. A few small Loans would not bear such expense, and were admitted on the faith of strong testimony, resulting from inquiries made as to the great utility of the work. Those at or close to Dublin were under the immediate observation of the Commissioners and their Engineer. The expenses higher than usual were occasioned either by the extent of the undertaking or the necessity for making out new plans; sometimes both combined.

(No. 4.)

RETURN of the SMALL PIERS erected on the Coast of *Ireland*, either wholly or in part at the Public Expense; showing their present State and Utility; chiefly extracted from a Report made to the Lords of the Treasury, dated the 27th of February 1833.

NAMES of PIERS, and Where situated.	OBSERVATIONS.
WYSE'S POINT, near Dungarvan, county of Waterford.	-- This Pier is now finishing by contract, under the Commissioners of Public Works, and is likely to prove very useful.
COURTMACSHERRY, county of Cork.	-- A most useful Pier, not only for the protection of the fisheries, but also for the purposes of trade; several hundreds of tons of corn having been shipped from it during the last year for Liverpool and Scotland. Timber, iron, &c. brought in return.
CLONAKILTY, county of Cork.	-- Much used as a safety harbour by the small craft for several miles round the coast; useful also for the purposes of trade, 800 tons of coal having been landed here during the last year. The roads leading to it are reported to be very much neglected.
GLANDORE, county of Cork.	-- This Pier affords protection to about 20 yawls, of 3 tons each, engaged in the fisheries. It is also much used for the purposes of trade, the village being a thriving one, much owing to the exertions of Mr. Redmond Barry, on whose land manganese, of apparently good quality, is being raised. It is stated that nearly 10,000*l.* has been expended on building within the last two years.
BALTIMORE, county of Cork.	-- A very useful Pier, executed by Lord Carbery, under contract with the late Fishery Board, partly from public funds and partly from funds contributed by his Lordship.
CAPE CLEAR ISLAND, county of Cork.	-- Affords very great protection to the poor islanders engaged in fishing, in all about 350 persons. The population is about 1,100 persons, for whom the island in good seasons supplies sufficient food; but in dry seasons the supply is insufficient.
LAWRENCE COVE, Bere Island, county of Cork.	-- A very useful fishery Pier, affording protection to 16 hookers of 12 tons each, and 90 yawls, of from 3 to 4 tons each, belonging to the island, and employing about 1,000 persons exclusively in the fisheries. Population of the island about 3,000. The inhabitants are described as wretchedly poor.
CASTLETOWN, Berehaven, county of Cork.	-- A Pier affording much protection to the fisheries. There are belonging to this port 4 decked boats of 20 tons each, 12 hookers of 12 tons, and 50 yawls of 4 tons each, affording employment to about 400 persons exclusively engaged in the fisheries. It is also much used for trading purposes, a district of ten miles being supplied from hence with timber, iron and mercantile goods generally. The roads connected with the pier are reported to be very bad. Copper mines are also working successfully at Allika, distant about four miles.
COOLAGH, county of Cork.	-- This work is much used for landing sea manure. Timber, slates, &c. are also imported. The surrounding district was entirely shut out from any communication till this pier was built. About six hookers, of 10 tons each, and 12 yawls, frequent it.
KENMARE, county of Kerry.	-- This Pier is described as of very great use for agricultural and mercantile purposes, but not of so much use to the fisheries. The town and country for several miles round it are stated to be in a very improving condition.
BALLINSKELLIGS, county of Kerry.	-- Much used by fishing vessels, and also for landing sea manure, from the use of large quantities of which the neighbouring country, for a distance of about 7 miles round, is improving much. The connecting roads are in very bad order. The inspecting commander of the coast-guard confirms this statement of our officers, as to the improvement of the district within the last few years, and attributes it to the same cause.
CAHIRCIVEEN, county of Kerry.	-- Useful both for fishery and agricultural purposes. About 400 persons derive partial employment from the fisheries; but being both farmers and fishermen, their attention is not given at the best seasons for fishing. The same improvement in the surrounding country is in progress here as has been before remarked on.
VALENTIA, county of Kerry.	-- The benefit derived from this Pier has been considerable, both to the fisheries and commerce. Its utility, also, as an asylum harbour has been frequently found; about 400 persons are exclusively employed in the fisheries, in which 100 Seine boats and 150 yawls are in use. Imports, chiefly from Liverpool, are iron, coal and timber; Exports, corn, butter and slates. The latter are of very fine quality, and the working of them gives employment to about 150 persons daily.

(No. 4.)—RETURN of the Small Piers erected on the Coast of *Ireland*—continued.

NAMES of PIERS, and Where situated.	OBSERVATIONS.
DINGLE, county of Kerry.	--Part of this Pier was originally built by the county, and afterwards added to, under the direction of the Fishery Board. Additions have also been made by the Customs Department. It is a most useful work, not only for mercantile and agricultural purposes, but also for the fisheries, which are carried on to some extent here, giving employment to about 2,000 persons.
BRANDON, county of Kerry.	--The boats used in the fisheries of this place are of the small class, being chiefly yawls and canoes, affording employment to about 250 men and boys. A large quantity of sea manure is landed here.
BARRA, county of Kerry.	--From the site of this Pier it is of no use, small craft not being able to approach it except at three quarters flood of spring tides.
KILRUSH, county of Clare.	--There are 20 small hookers, engaged in fishing and dredging for oysters, belonging to this port, affording employment to about 200 persons. The Pier is of much use in a mercantile and agricultural point of view. A small steam vessel plies between Kilrush and Limerick.
CARRIGAHOLT, county of Clare.	--A useful Pier both for the fisheries and trade. Six hookers, of 7 tons each, and upwards of 500 canoes or corrachs (small cots, some covered with horse hides, others with canvas paid over with composition,) give employment to about 400 persons in fishing, and to farmers occasionally. Turf shipped from hence.
KILBAHA, county of Clare.	--Owing to the facilities afforded by this Pier for landing sea manure, the country round it bears evident marks of agricultural improvement. It is also useful to the fisheries, in which about 110 persons are exclusively employed, and it is also an asylum harbour for small craft coming in from Loop Head, and other fishing stations, to the Shannon.
DUNBEG, county of Clare.	--This Pier is not much frequented by fishing boats. It is, however, very useful for agricultural purposes, and also as a place of refuge in hard weather for small craft.
SEAFIELD, county of Clare.	Can be approached at spring tides only by a vessel of 12 tons, but is capable of much improvement, and might then be very useful.
LISCANNOR, county of Clare.	--This Pier is situated on a very bold and dangerous shore, exposed to the force of the Atlantic, and has been several times much injured. It, however, affords considerable shelter to small craft, and is much used for the purposes of trade.
BURRIN QUAY, county of Clare.	--Thirty hookers, of about 12 tons, and 150 yawls, of 3 tons each, frequent this place, giving employment to about 500 men in the fisheries. Large quantities of corn, butter, pigs and sheep are shipped here. In hard weather, 100 sail of small craft have been known to take refuge in this harbour.
ST. KITT'S, county of Galway.	But little benefit is derived from this Pier, as none but small craft can approach it. No road leading to it.
DURASS, county of Galway.	--This appears to be a work more of private than public accommodation, although a small sum was contributed towards its erection from Government funds.
BALLINACOURTY, county of Galway.	Never properly finished, owing to which the works have been completely destroyed.
CLADDAGH PIER, in the Suburbs of Galway.	--A most convenient and useful Pier for the numerous fishing boats belonging to this place, in number about 140 sail-boats, from 12 to 14 tons, and 50 row-boats, of 5 or 6 tons each, employing near 2,200 persons. With all the advantages of good boats and accommodation, there are few places where the fisheries are carried on with so little enterprise.
STATE PIER, Galway Harbour.	This is a Work of much importance, as it affords considerable shelter to the docks and quays of Galway.
KILLENY PIER, Western Isles of Arran.	--There are 39 hookers frequenting this Pier, giving employment exclusively in fishing to about 350 persons. A large quantity of sea manure is shipped here for the shores of Clare and Galway; a coast-guard station; the officers of which have made some improvements in the Works, with the aid of funds from the London and Dublin Charitable Societies. The inhabitants are wretchedly poor.
COSTELLOE, county of Galway.	This is a Work of but little use, and in a state of dilapidation; not worth the cost of repairing it.
GREATMAN'S BAY, county of Galway.	--This Pier being left incomplete, was destroyed; subsequently, the materials were collected, and the Pier, for good part of its length, was re-built by Lieutenant White, of the coast-guard, and the collector of Galway, with funds from the Charitable Societies. It is found to be very useful.

(No. 4.)—RETURN of the Small Piers erected on the Coast of *Ireland*—continued.

NAMES of PIERS, and Where situated.	OBSERVATIONS.
SPIDDLE, county of Galway.	This Pier is but of little use, and is much out of repair.
BARNA, county of Galway.	--The Pier was originally built by a private individual in 1799, and re-built by Mr. Nimmo in 1822; but, being badly erected, in 1830 it was destroyed, and in 1831 was again partially re-built by the officer of the coast-guard and collector of Galway with the charitable funds. It is found to be very useful for the fisheries; and it is sheltered from the S. and S. W. gales, and the only safety harbour for small craft on 27 miles of coast.
NEW HARBOUR, Ardfery, county of Galway.	--A very useful Pier for landing turf and sea manure for a considerable district, as well as for affording shelter from the W. and S. W. winds, vessels frequently running up from the roadstead of Galway to shelter here.
CLIFDEN, county of Galway.	--This is a Quay-wall, partly unfinished. Captain Boileau, of the coast-guard, expended some of the charitable funds in adding to its length. Corn and butter are shipped here for Liverpool, and large quantities of sea manure landed. About 90 persons employed in fishing.
ROUNDSTONE, county of Galway.	--Thirty sailing-boats, averaging 10 tons, and 40 rowing boats, of 4 tons each, frequent this Pier. The former occasionally employed in bringing corn, kelp and turf to Galway. About 250 persons constantly employed between fishing and trading.
CLEGGAN, county of Galway.	This is found to be a useful Work.
CLOONISH PIER, county of Galway.	--Useful for the landing of sea manure, and shipping of turf for Galway. Mr. Seymour reports, that the "face of the country is fast improving from the advantages derived from the sea manure; particularly so since the manufacture of kelp was given up."
DERRY-INVER, county of Galway.	--This Pier is the only place of refuge in Ballinakill Bay. The country round it is rapidly improving, and the Pier is a very useful one for the trade and fisheries.
LENANE PIER, Killeny Bay, county of Galway.	About 30 row-boats, occasionally employed in fishing, frequent this Pier. Its situation is near the junction of the Westport, Clifden and Galway roads.
BUNDURRAGH, county of Mayo.	Of use for the landing of sea manure and sand, large quantities of which are used in improving the neighbouring mountainous country.
INNISTURK, county of Mayo.	--This Pier has fallen into ruins, and is a severe loss to the poor islanders, composed of about 80 families, chiefly dependent on the fisheries for support. The Pier was built on the only landing place in the island.
OLD HEAD, county of Mayo.	Not much frequented by fishing boats, but large quantities of sea manure are landed here.
CLARE ISLAND, county of Mayo.	--About 340 men and boys occasionally employed in the fisheries, being also farmers; large quantities of sea manure landed, and the island improving in agriculture. Much grain shipped here for Westport. Population about 1,600.
ACHIL SOUND, county of Mayo.	--This Pier badly executed, and never completely finished. There are 50 sail-boats, averaging 8 tons, and 100 yawls, averaging 2 tons each, which frequent this harbour, giving occasional employment to about 500 persons.
TARMON BLACKSOD BAY, county of Mayo.	--This is an extensive and tolerably well-built pier; 20 hookers, of 6 tons each, and about 100 yawls frequent it. Those persons engaged in the fisheries on this part of the coast are, generally speaking, farmers as well as fishermen.
SALEEN, near Newtown Bingham, county of Mayo.	--Little used as a fishing station, but considerable quantities of corn and potatoes are shipped here for Westport, and merchandize brought back in return. A small expenditure, in completing the inner dock, would make this harbour much more useful.
BELMULLET, county of Mayo.	--This Pier affords good shelter from the S. E. and W. winds; at three-quarters flood spring-tides a vessel of 100 tons can get alongside the Pier. Described as a good fishing station, but the fishermen not enterprising. The Pier is also of great use for mercantile purposes, the imports being timber, iron, slates, &c. in return for grain, and other agricultural produce. It is stated that from this small village, about 1,300 tons of oats were shipped for the English and Scotch markets last season. It has often been suggested to cut a canal across the narrow isthmus which divides Broadhaven and Blacksod bays, by which means a vessel could put to sea with any wind from either of the harbours.

(*continued.*)

(No. 4.)—RETURN of the Small Piers erected on the Coast of *Ireland*—continued.

NAMES of PIERS, and Where situated.	OBSERVATIONS.
KILLALA, county of Mayo.	--A good fishing station; about 360 persons occasionally employed. Much sea manure landed here. The country reported to be much improved since 1827. About 7,000 tons of barley and oats annually exported. Imports timber, iron, slates and coals (for malting); harbour tolls are charged. The Pier is an old one, and has been merely repaired with public funds.
PULLAGHENY, county of Sligo.	--The work was left in an unfinished state, and what had been executed is now down, the materials lying on the strand. There is a coast-guard station here; and if the works were completed, a vessel of 150 tons might run in at one-quarter flood.
ROUGHLEY, county of Sligo.	--About 200 persons occasionally employed in the fisheries at this Pier. Large quantities of sea manure also landed here. A coast-guard station. Nearest road to the Pier distant half a mile.
PORTNOE, county of Donegal.	--This Pier has proved of much protection to the boats frequenting it, as previous to its erection none could approach the shore with safety. With strong gales, however, from the S. W. it is unsafe. Large quantities of sea manure are landed here, and it is likely to be soon used as a place of shipment for corn. At spring-tides, vessels drawing 12 feet of water can lie alongside.
PORTMORE, county of Donegal.	This Pier, not yet completed, owing to the contractor getting into difficulties. Steps will be taken at the opening of the season, to expedite the work.
GREENCASTLE, county of Donegal.	This Pier completed and found useful, affording shelter from S. W. and S. E. winds.
CARRICKFERGUS, county of Antrim.	This Pier has been completed, and is useful to the fisheries, about 500 persons being employed in them.
PORTMUCK, Island of Magee, county of Antrim.	Much used by the fishermen, and also as a place of shelter. Vast quantities of lime stone shipped here for Scotland and various parts of the coast.
KIMMERSPORT, Ardglass Harbour, county of Down.	--This Pier is situated at the inner end of Ardglass harbour, and is of much use to the fishing vessels and other small craft. It has been much used for trading purposes, previous to the completing of the large Pier.
NEWCASTLE, county of Down.	--This is an extensive Pier, and can be used by a large class of vessels at high water. Imports,—coals, timber and slate. Exports,—oats and barley, and a large quantity of potatoes for Dublin and Liverpool
CLOGHER HEAD, county of Louth.	--This is a small Dock, partly natural and partly excavated; a passage has been cut through the beach for boats to enter it. It affords shelter from all winds, except the N. E. There are 7 smacks of from 25 to 40 tons each, and 20 row-boats, exclusively engaged in fishing; it is also much frequented by the fishing vessels of other stations.
BALBRIGGAN, county of Dublin.	--This is an extensive Pier. Some vessels of a superior description to those generally employed are engaged in the fisheries here, and the fishermen of this coast are much more enterprising than those on the western coast. It is also a very useful harbour for trading purposes.
LAMBAY ISLAND, county of Dublin.	Completed. It is a small fishing station.
ARTHURSTOWN, county of Waterford.	This Pier has been lately completed, and is likely to be very useful for export and import trade. It is open by good roads to an extensive district.

Office of Public Works, Dublin, 11 May 1835.

Henry R. Paine, Sec.

(No. 5.—PARTICULARS of LOANS made by the late COMMISSIONERS under the 57 GEO. III. and subsequent Acts.

No. of Loan.	To Whom Made.	When.	AMOUNT In British Money.	Rate of Interest.	Instalments Repayable. Amount of Each.	Instalments Repayable. At what Dates Payable.	First When Due.	Final Period For Repayment.	Instalments in Arrear to 5 Jan. 1832. No.	Principal.	Interest.
			£. s. d.	£.	£. s. d.					£. s. d.	£. s. d.
1	Marquis Sligo and another	27 Sept. - 1817	921 18 9	5	64 10 8	1 Aug. 1819 & annually	1 Aug. - 1819	1 Aug. - 1833	1	64 10 1	28 8 5
2	Jocelyn Thomas	25 Oct - 1817	923 1 6	5	46 3 1	Annually 1 Nov.	1 Nov. - 1818	1 Nov. - 1837	–	- - -	5 7 –
4	Navan Turnpike Commissioners	27 Nov. - 1817	5,538 9 3	6	332 6 2	ditto 1 Jan.	1 Jan. - 1819	1 Jan. - 1835	15	3,705 12 6	2,274 7 6
24	Ditto	20 August 1819	3,046 3 1	5	553 16 11	ditto 1 Sept.	1 Sept. - 1819	1 Sept. - 1824	3	1,286 14 10	559 8 4
53	Ditto	13 Oct. - 1823	923 1 7	5	307 13 9	ditto 1 May	1 May - 1824	1 May - 1826	3	923 1 7	379 14 6
5	Wexford Corporation	31 Dec. - 1817	923 1 7	6	55 7 8	ditto 1 Jan.	1 Jan. - 1819	1 Jan. - 1837	1	57 5 9	21 8 10
7	Earl Clancarty	25 Jan. - 1818	553 16 11	5	27 13 10	ditto 1 Jan.	1 Jan. - 1819	1 Jan. - 1838	–	- - -	5 12 10
8	Portumna Bridge Corporation	31 Jan. - 1818	2,769 4 8	6	166 3 1	ditto 1 Jan.	1 Jan. - 1820	1 Jan. - 1836	13	2,160 – 1	1,204 15 1
9	Nicholas P. Leader	20 Feb. - 1818	9,230 15 5	5	461 10 9	ditto 1 July	1 July - 1819	1 July - 1838	2	981 16 11	226 18 6
107	Ditto	22 Nov. - 1826	10,000 – –	4	500 – –	ditto 1 Dec.	1 Dec. - 1827	1 Dec. - 1846	–	- - -	—
12	G. Lambert and B. Maguire	27 April - 1818	461 10 9	5	64 12 3	ditto 1 July	1 July - 1819	1 July - 1826	6	332 6 2	197 5 1
13	Cork Wide-street Commissioners	29 April - 1818	6,461 10 9	6	387 13 10	ditto 1 July	1 July - 1819	1 July - 1835	2	1,236 18 6	717 2 3
28	Ditto	20 April - 1820	4,615 7 8	5	230 15 5	ditto 1 April	1 April - 1821	1 April - 1840			
113	Ditto	4 Sept. - 1827	7,000 – –	5	350 – –	ditto 1 August	1 Aug. - 1830	1 Aug. - 1849	2	700 – –	1,502 12 –
14	Hovenden Stapleton	14 July - 1818	1,846 3 1	5	92 6 2	ditto 1 October	1 Oct. - 1819	1 Oct. - 1838	4	369 4 2	84 7 9
18	Mayo County Grand Jury	30 Nov. - 1818	7,703 14 –	5	385 3 8	1 May and 1 Nov.	1 Nov. - 1819	1 May - 1833	3	1,155 11 –	168 13 7
40	Ditto	14 Sept. - 1822	2,221 10 5	5	111 1 6	1 March and 1 Sept.	1 Mar. - 1823	1 Sept. - 1837	2	221 15 2	88 8 9
52	Ditto	20 Sept. - 1823	477 18 6	5	23 18 –	1 May and 1 Nov.	1 May - 1824	1 Nov. - 1838	–	- - -	10 7 4
21	Marquis Sligo and another	20 Feb. - 1819	1,956 18 2	5	98 – –	20 February	20 Feb. - 1820	20 Feb. - 1839	–	- - -	6 12 9
25	Owen M'Carthy	4 Sept. - 1819	2,769 4 8	5	138 9 3	1 October annually	1 Oct. - 1820	1 Oct. - 1839	4½	627 10 4	200 – 11
27	Kerry County Grand Jury	6 Nov. - 1819	3,581 8 5	5	180 – –	1 May and 1 Nov.	1 May - 1820	1 May - 1834	1	46 2 5	132 7 2
34	Ditto	29 Jan. - 1822	1,231 – 1	5	61 11 –	1 May and 1 Nov.	1 May - 1822	1 May - 1836	–	- - -	48 7 1
37	Ditto	29 March - 1822	5,925 8 6	5	296 5 6	1 Nov. and 1 May	1 Nov. - 1822	1 Nov. - 1836	–	- - -	250 7 11
51	Ditto	7 August 1823	3,390 14 11	5	169 10 10	1 Jan. and 1 July	1 Jan. - 1824	1 Jan. - 1838	–	- - -	150 4 6
58	Ditto	1 Nov. - 1823	2,016 11 1	5	109 5 –	1 May and 1 Nov.	1 May - 1824	1 May - 1838	–	- - -	85 18 7
71	Ditto	8 Oct. - 1824	1,270 13 2	5	63 10 8	1 March and 1 Sept.	1 Mar. - 1825	1 Mar. - 1839	–	- - -	53 17 3
29	Kilkenny County Grand Jury	2 Oct. - 1820	1,380 4 2	5	69 – 2	1 April and 1 Oct.	1 April - 1821	1 April - 1835	–	- - -	37 8 –
35	Ditto	27 April - 1822	348 5 7	5	17 8 4	1 Nov. and 1 April	1 Nov. - 1822	1 Nov. - 1836	–	- - -	13 13 11
43	Ditto	1 Nov. - 1822	507 19 –	5	25 8 –	1 March and 1 Sept.	1 Mar. - 1823	1 Mar. - 1837	–	- - -	18 7 –
57	Ditto	3 Dec. - 1823	923 1 6	5	46 3 –	1 May and 1 Nov.	1 May - 1824	1 May - 1838	–	- - -	38 1 2
92	Ditto	3 Oct. - 1825	1,607 10 9	5	80 7 6	1 Feb. and 1 Aug.	1 Feb. - 1826	1 Feb. - 1840	12	478 6 2	90 10 2
97	Ditto	8 May - 1826	1,818 9 3	5	90 18 6	1 Nov. and 1 May	1 Nov. - 1826	1 Nov. - 1840	1	52 8 11	87 1 2
114	Ditto	15 Sept. - 1827	370 – –	–	18 10 –	1 Jan. and 1 July	1 Jan. - 1828	1 Jan. - 1842	–	- - -	14 5 3
122	Ditto	27 May - 1828	348 – –	5	17 8 –	1 Nov. and 1 May	1 Nov. - 1828	1 Nov. - 1842	–	- - -	37 1 7
31	Galway County Grand Jury	15 March 1821	3,499 17 5	5	175 – –	1 July and 1 Jan.	1 July - 1821	1 July - 1834	–	- - -	26 10 1
93	Ditto	3 Nov. - 1824	571 16 11	5	57 3 8	1 March and 1 Sept.	1 Mar. - 1825	1 Mar. - 1831	4	182 18 –	3 16 6
33	Queen's County Grand Jury	9 July - 1821	830 15 5	5	41 10 10	6 Nov. and 6 May	6 Nov. - 1821	6 Nov. - 1834	–	- - -	9 2 4
119	Ditto	4 Jan. - 1828	3,000 – –	5	150 – –	1 April and 1 Oct.	1 April - 1828	1 April - 1841	–	- - -	30 17 6
36	Cork County Grand Jury	12 April - 1822	1,939 19 8	5	97 – –	1 Nov. and 1 May	1 Nov. - 1822	1 Nov. - 1835	½	48 10 –	10 9 4
38	Ditto	3 May - 1822	2,546 12 5	5	127 6 7	1 Jan. and 1 July	1 Jan. - 1823	1 Jan. - 1836	1⅙	150 3 –	13 9 5

(continued.)

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(No. 5.)—PARTICULARS of Loans made by the late Commissioners under the 57 Geo. III. and subsequent Acts—*continued*.

No. of Loan.	To Whom Made.	When.	AMOUNT In British Money.	Rate of Interest.	Instalments Repayable. Amount of Each.	Instalments Repayable. At what Dates Payable.	First When Due.	Final Period For Repayment.	Instalments in Arrear to 5 Jan. 1832. No.	Principal.	Interest.
			£. s. d.	£.	£. s. d.					£. s. d.	£. s. d.
74 to 80	Cork County Grand Jury -	29 Oct. - 1824	8,001 13 5	5	400 1 8	1 March and 1 Sept.	1 Mar. - 1825	1 Mar. - 1838	–	- - -	45 15 6
39	Cavan County Grand Jury -	21 Aug. - 1822	5,538 9 3	5	276 18 6	1 Nov. and 1 May -	1 Nov. - 1822	1 Nov. - 1835	–	- - -	—
42	Waterford County Grand Jury	22 Oct. - 1822	551 11 4	5	27 11 6	1 May and 1 Nov. -	1 May - 1823	1 May - 1836	–	- - -	—
50	Ditto - - - -	21 July - 1823	1,846 3 1	5	92 6 2	1 Dec. and 1 June -	1 Dec. - 1823	1 Dec. - 1836	½	41 - -	48 17 7
62	Ditto - - - -	10 May - 1824	674 17 10	5	33 14 10	1 Oct. and 1 April -	1 Oct. - 1824	1 Oct. - 1837	1	27 - -	6 6 1
88	Ditto - - - -	26 July - 1825	1,561 17 10	5	78 1 10	1 Dec. and 1 June -	1 Dec. - 1825	1 Dec. - 1838	–	- - -	13 9 -
115	Ditto - - - -	6 Oct. - 1827	14,899 18 10	5	745 - 8	1 Jan. and 1 July -	1 Jan. - 1828	1 Jan. - 1841	–	- - -	135 6 -
45	Grand Canal Company - -	15 Nov. - 1823	43,484 18 5	4	2,174 5 -	1 December - -	1 Dec. - 1827	1 Dec. - 1846	5	10,871 5 -	9,367 3 2
105	Ditto - - - -	17 Oct. - 1826	2,769 4 8	4	138 9 3	1 December - -	1 Dec. - 1829	1 Dec. - 1848	3	415 7 9	366 15 10
90	Ditto - - - -	3 Nov. - 1826	33,416 6 2	4	1,670 16 4	1 December - -	1 Dec. - 1829	1 Dec. - 1848	3	5,012 9 -	5,560 16 7
135	Ditto - - - -	11 Jan. - 1828	18,000 - -	4	900 - -	11 January - -	11 Jan. - 1831	11 Jan. - 1850	1	900 - -	945 1 8
46	Right Honourable D. Browne and others - - -	12 May - 1823	276 18 6	5	13 16 10	12 May - - -	12 May - 1824	12 May - 1843	1	13 16 3	12 2 4
47	Rev. E. F. Conyers - -	28 May - 1823	221 10 9	5	22 3 -	28 May - - -	28 May - 1824	28 May - 1833	–	- - -	7 - 1
48	Lord Bantry and M. Murphy -	23 Feb. - 1823	1,846 3 1	5	92 6 2	23 February - -	23 Feb. - 1824	23 Feb. - 1843	1½	138 9 4	269 9 2
49	Galway Town Grand Jury -	1 August 1823	2,769 4 8	5	138 9 3	1 May and 1 Nov. -	1 May - 1824	1 May - 1837	1	138 9 3	122 18 -
87	Ditto - - - -	22 July - 1825	553 16 11	- -	27 13 10	1 Jan. and 1 July -	1 Jan. - 1826	1 Jan. - 1837	2	55 7 8	28 18 -
54	Wicklow County Grand Jury -	13 Oct. - 1823	2,466 1 11	- -	123 6 1	1 May and 1 Nov. -	1 May - 1824	1 May - 1837	1	123 6 1	60 11 6
72	Ditto - - - -	11 Oct. - 1824	2,017 12 3	- -	100 17 7	1 March and 1 Sept.	1 Mar. - 1825	1 Mar. - 1838	–	- - -	47 3 11
130	Ditto - - - -	29 May - 1828	2,786 12 4	- -	139 6 7	1 Nov. and 1 May -	1 Nov. - 1828	1 Nov. - 1841	–	- - -	70 12 8
55	Leitrim County Grand Jury -	3 Nov. - 1823	3,405 18 4	- -	170 5 10	1 May and 1 Nov. -	1 May - 1824	1 May - 1837	–	- - -	98 5 4
104	Ditto - - - -	3 Oct. - 1826	3,323 1 7	- -	170 6 -	1 March and 1 Sept.	1 Mar. - 1827	1 Mar. - 1840	–	- - -	78 2 2
125	Ditto - - - -	6 May - 1828	1,061 17 3	- -	54 11 9	1 Oct. and 1 April -	1 Oct. - 1828	1 Oct. - 1841	–	- - -	57 19 5
128	Ditto - - - -	24 June - 1828	1,415 7 10	- -	70 15 -	1 Oct. and 1 April -	1 Oct. - 1828	1 Oct. - 1841	1	70 15 -	78 6 4
129	Ditto - - - -	24 June - 1828	1,703 14 2	- -	85 3 6	1 Nov. and 1 May -	1 Nov. - 1828	1 Nov. - 1841	1	85 3 6	94 - 10
56	Armagh County Grand Jury -	28 August 1823	923 1 7	- -	50 - -	1 May and 1 Nov. -	1 May - 1824	1 May - 1837	–	- - -	21 2 7
61	Limerick Bridge Commissioners	13 May - 1824	55,384 12 4	4	2,769 4 7	1 May annually, besides interest -	1 May - 1830	1 May - 1849	2	5,538 9 2	3,144 8 4
63	Limerick County Grand Jury -	4 June - 1824	2,806 3 11	5	140 6 2	1 Nov. and 1 May -	1 Nov. - 1824	1 Nov. - 1837	–	- - -	16 9 4
66	Drogheda Town Grand Jury -	15 June - 1824	148 8 4	5	7 8 4	1 Oct. and 1 April -	1 Oct. - 1824	1 Oct. - 1837	–	- - -	3 19 5
67	Cork City Grand Jury - -	24 June - 1824	7,649 2 3	4	382 9 1	1 Nov. and 1 May -	1 Nov. - 1824	1 Nov. - 1837	–	- - -	96 12 -
98	Ditto - - - -	3 May - 1826	4,900 11 -	5	245 - 7	1 Nov. and 1 May -	1 Nov. - 1826	1 Nov. - 1839	–	- - -	186 3 6
68	Rev. H. Pasley, &c. - -	12 July - 1824	276 18 5	5	13 16 11	12 July - - -	12 July - 1825	12 July - 1844	6	83 1 6	81 12 1
69	Roscommon County Grand Jury	27 July - 1824	5,309 10 9	5	265 9 6	1 Nov. and 1 May -	1 Nov. - 1824	1 Nov. - 1837	–	- - -	116 15 7
84	Ditto - - - -	20 May - 1825	3,665 10 9	5	183 5 6	1 Nov. and 1 May -	1 Nov. - 1825	1 Nov. - 1838	–	- - -	73 16 4
109	Ditto - - - -	27 July - 1827	800 - -	5	40 - -	1 Jan. and 1 July -	1 Jan. - 1828	1 Jan. - 1841	–	- - -	20 13 5
120	Ditto - - - -	10 Nov. - 1827	800 - -	5	40 - -	1 Feb. and 1 August -	1 Feb. - 1828	1 Feb. - 1841	–	- - -	23 15 11
134	Ditto - - - -	22 July - 1828	450 - -	5	22 10 -	1 Nov. and 1 May -	1 Nov. - 1828	1 Nov. - 1841	–	- - -	13 - 6

70	R. H. Maunsell	3 Sept.	1824	1,504	12	4	5	75	4	7	1 Sept. annually	1 Sept.	1825	1 Sept.	1844	–	–	–	–	69	8	7
73	Donegal County Grand Jury	16 August	1824	493	16	11	–	–	24	13	10	1 Nov. and 1 May	1 Nov.	1824	1 Nov.	1837	–	–	–	–	21	1	2
81	Ditto	17 Jan.	1825	470	15	5	–	–	23	10	9	1 May and 1 Nov.	1 May	1825	1 May	1838	–	–	–	–	22	–	7
82	Westmeath County Grand Jury	31 Jan.	1824	5,309	2	6	–	–	288	15	11	1 June and 1 Dec.	1 June	1824	1 June	1836	–	–	–	–	37	15	8
85	Fermanagh County Grand Jury	2 June	1825	2,307	13	10	5		519	4	7	1 Nov. and 1 May	1 Nov.	1825	1 Nov.	1830	–	76	7	1	51	18	11
100	Ditto	28 May	1826	762	12	7	5		238	2	7	1 Nov. and 1 May	1 Nov.	1826	1 Nov.	1829	–	125	14	11	25	14	9
118	Ditto	30 Oct.	1827	915	15	–	–	–	122	17	10	1 Feb. and 1 August	1 Feb.	1828	1 Feb.	1832	2	211	–	1	24	1	2
126	Ditto	8 June	1828	2,054	12	2	–	–	201	7	3	1 Nov. and 1 May	1 Nov.	1828	1 Nov.	1841	–	–	–	–	69	19	9
86	Dundalk Road Commissioners	10 Dec.	1824	2,769	4	8	5		138	9	3	1 October	1 Oct.	1825	1 Oct.	1844	2	217	–	–	63	–	1
89	Wexford County Grand Jury	28 July	1825	1,481	5	4	5		74	1	3	1 Aug. and 1 Feb.	1 Feb.	1826	1 Feb.	1839	–	–	–	–	72	–	4
108	Ditto	28 August	1827	1,334	8	–	–	–	66	14	5	1 Oct. and 1 April	1 Oct.	1827	1 Oct.	1840	2	133	8	10	74	10	8
131	Ditto	9 June	1828	4,022	6	1	5		201	2	4	1 Nov. and 1 May	1 Nov.	1828	1 Nov.	1841	–	–	–	–	121	–	–
91	Maghera Culmoney Churchwardens	26 Sept.	1825	276	18	6	–	–	18	9	2	1 Oct. annually	1 Oct.	1826	1 Oct.	1845	–	–	–	–	12	15	7
94	Carlow County Grand Jury	21 Oct.	1825	701	10	9	5		35	1	6	1 Feb. and 1 Aug.	1 Feb.	1826	1 Feb.	1839	–	–	–	–	5	15	5
95	Tyrone County Grand Jury	12 Oct.	1825	1,744	12	4	5		130	12	9	1 April and 1 Oct.	1 April	1826	1 Oct.	1834	–	–	–	–	58	12	9
101	Ditto	9 June	1826	2,709	5	8	5		431	15	1	1 Nov. and 1 May	1 Nov.	1826	1 May	1830	–	139	8	7	48	17	10
103	Ditto	21 June	1826	990	9	5	5		107	6	7	1 Jan. and 1 July	1 Jan.	1827	1 Jan.	1833	–	–	–	–	19	7	8
110	Ditto	7 Aug.	1827	1,535	–	–	5		102	6	8	1 Jan. and 1 July	1 Jan.	1828	1 July	1838	–	–	–	–	61	3	11
116	Ditto	7 Aug.	1827	3,068	–	6	5		204	11	4	1 Jan. and 1 July	1 Jan.	1828	1 July	1838	–	–	–	–	123	18	–
127	Ditto	30 May	1828	1,733	14	3	5		187	16	5	1 Nov. and 1 May	1 Nov.	1828	1 May	1833	2	375	12	10	59	4	7
132	Ditto	30 July	1828	1,511	7	10	5	–	–	–	1 Nov. and 1 May	1 Nov.	1828	£.1,016,1 Nov.1834 £.495. 10. 11. ditto.		–	–	–	–	28	18	10
133	Ditto	30 July	1828	3,810	10	11	5	285	15	10	1 Nov. and 1 May	1 Nov.	1828	1 May	1837	–	–	–	–	133	8	–
138	Ditto	23 Dec.	1829	2,504	14	8	5	140	17	10	1 May and 1 Nov.	1 May	1830	1 Nov.	1842	1½	120	–	–	88	1	5
96	Nich. D. Crommelin	7 March	1826	10,000	–	–	4	250 & interest			1 Sept. and 1 March	1 Sept.	1829	1 Sept.	1848	5	1,250	–	–	2,225	9	11
137	Ditto	29 May	1829	1,967	16	3	4	49	3	11	do. 1 Dec. and 1 June	1 Dec.	1829	1 Dec.	1848	5	245	19	7	199	6	9
106	Athlunkard Bridge Commissioners	16 Oct.	1826	6,000	–	–	4	300	–	do.	–	1 Oct.	1829	1 Oct.	1848	3	900	–	–	969	6	3
111	Sligo County Grand Jury	7 Sept.	1827	2,139	9	8	5	107	4	4	1 Jan. and 1 July	1 Jan.	1828	1 Jan.	1841	2	214	–	–	165	11	–
112	Waterford City Grand Jury	14 Sept.	1827	1,378	–	7	5	103	7	6	1 Jan. and 1 July	1 Jan.	1828	1 July	1837	–	–	–	–	10	12	9
121	Londonderry City Grand Jury	12 May	1828	755	12	8	5	56	13	6	1 Nov. and 1 May	1 Nov.	1828	1 May	1837	–	–	–	–	38	1	–
123	Limerick City Grand Jury	28 May	1818	283	1	6	5	14	3	–	1 June and 1 Dec.	1 June	1828	1 June	1841	2½	39	–	–	2	17	8
124	Clare County Grand Jury	17 May	1828	3,123	11	3	5	338	7	8	1 July and 1 Jan.	1 July	1828	1 Jan.	1834	–	–	–	–	73	12	–
136	Ditto	20 August	1828	1,256	3	6	5	136	1	8	1 Oct. and 1 April	1 Oct.	1828	1 April	1834	–	–	–	–	32	5	3
139	Youghall Bridge Commissioners	28 July	1830	10,000	–	–	4	500	–	–	Annually from opening of bridge			–		–	–	–	–	372	16	4
102	Marquis Sligo and D. Browne	7 June	1826	415	7	8	5	20	15	4	- ditto	7 June	1826	7 June	1846	–						
			£.	426,490	11	10												£.		35,529	12	1

(Errors excepted.)

Brook T. Ottley.

N.B.—The progress of Repayments since 5th January 1832 will be found in the Annual Reports from the Commissioners of Public Works.

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Appendix, No. 3.

PAPERS delivered in to the Committee, by *Maurice FitzGerald*, Esq.

TABLE of Distance in British Miles.

1st. From *London* to *Valentia*.

By Bristol:		By Milford (Mail route):	
London to Bristol	120	London to Milford	260
Bristol to Cork	262	Milford to Dunmore	86
Cork to Valentia	90	Dunmore to Waterford	10
		Waterford to Valentia	140
	472		496
By Holyhead (Mail route):		By Liverpool (Mail route):	
Valentia to Limerick	90	London to Liverpool	208
Limerick to Dublin	117	Liverpool to Dublin Quay, 120 nautical miles	138
Dublin to Howth	9	Dublin to Valentia	207
Howth to Holyhead	61		
Holyhead to London	260		
	537		553
Through Killarney	13 more.		
Bristol to Valentia:		Liverpool to Valentia:	
Bristol to Cork	262	Liverpool to Dublin	138
Cork to Valentia	90	Dublin to Valentia	207
	352		345
By Milford (Mail route):		Glasgow to Valentia:	
Bristol to Milford	151	Glasgow to Belfast	132
Milford to Dunmore	86	Belfast to Dublin	102
Dunmore to Waterford	10	Dublin to Valentia	207
Waterford to Valentia	140		
	387		441

Distances from *Falmouth*.

		By the Course of Foreign Mails.
Falmouth to London direct	269	269
„ to Bristol	156	389
„ to Liverpool	325	477
„ to Glasgow	525	677

From *London* to *Halifax*, British Miles.

		B. M.
1st.	Halifax to Lizard Point, 2,394 sea miles	2,755
	Lizard to Falmouth	20
	Falmouth to London	269
	Total from Halifax to London	3,044 British miles.
2d.	Distance from London to Halifax by Valentia, 2,165 sea miles, or	2,491 British.
	Bray-head to the Ferry	7
		2,498
	Valentia, by Cork, to London	472
		2,970
	Halifax to London, 74 miles shorter by Valentia.	
3d.	Valentia to Halifax, by Milford:	
	Valentia to Halifax	2,498
	Ditto, by Milford, to London	496
		2,994
	Halifax, by Lizard, to London	3,044
	Shorter by Milford	50 British miles.

Those

Those nautical distances being calculated upon the Rhumb Lines, are not the shortest which may be sailed. Where there is so great a difference of longitude, a considerable savingwill be made, by keeping nearer to the Great Circle, passing through the given places, which is, of course, the shortest possible. The Great Circle passing through Halifax and Valentia, or even Falmouth, runs considerably inland, both in Nova Scotia and Newfoundland, and, of course, cannot be sailed upon. This shows, what would not be suspected from looking at Mercator's Chart, that Cape Race ought to be the first place made for by any vessel bound from Britain to America, and especially a steamer.

From thence a direct course along the coast may be made to Halifax, and so on to New York, and from the same point to Quebec.

We may now inquire what the distance is in that way; viz. Coasting to Cape Race, and thence by the Great Circle to Valentia or the Lizard.

Halifax to Cape Race, 457 sea miles, or - - - - - 526 British.
On Great Circle, from the Lizard to Cape Race, 1,885 sea miles, or 2,169 „

	2,695
By the Rhumb - - -	2,755
On the Great Circle - -	60 less than the Rhumb.

DISTANCES on the Great Circle from *Bray Head, Valentia*, to *Cape Race:*

1,672½ sea miles, or - - - -	1,924 British.
Halifax - - - - - -	526
	2,450
Valentia to Halifax on the Rhumb Lines - -	2,498
Ditto - to - ditto on Great Circle - - -	2,450
Saving on Great Circle - -	48 British miles.

To find Starting Course at Lizard, on Great Circle.

Cos. 47	826723
Cot. 46 40×	974719
Tan. 32 20×	
40 2×	801442
7 42 Lin.	127060
32 20 Lin.	728227
Tan. 47	043300
Co. 77 13½	
	644467

or W. by N. ⅛ N., which is nearly two points to the northward of the Rhumb. This course will lead within 60 miles of Valentia, and the Great Circle at its most northerly point will be n lat. 51° 7′, viz. at about 600 miles west of the Lizard.

In like manner the Great Circle course at starting from Valentia for Cape Race will be found about W. ¼ N., and will not attain a much higher latitude; so that it will be pretty near the object if we sail, say 10° long. to the westward, and then make for Cape Race, which will be found to give a distance of 1,685 miles, or only 12 miles less than by the Great Circle.

The whole distance then in British miles to Halifax, 2,465, instead of 2,498, as before found.

These observation are made, not to show that there is any particular advantage to Valentia in taking the Great Circle courses, for this is still more in favour of Falmouth, but mainly to point out the great advantage in either case of keeping the higher latitudes, instead of standing to the southward, as is the ordinary practice, and as would naturally appear to be the best from Mercator's Chart.

In fact, a Falmouth packet, if she adopts the shortest course, will be so near the coast of Ireland, that it would be little more than 20 miles round to call at Valentia on the way, as will appear from the following calculation:—

Lizard to Port Levan - - -	19 sea miles.
Port Levan to Dursey - -	200
Dursey to Valentia - - -	20
Sea miles - -	239, or 273 British.
Valentia to Halifax - -	2,498
	2,771
Lizard to Halifax - -	2,755
A round of only - - -	16 miles.

By the Great Circle - - -	273 to Valentia.
Valentia to Halifax - - -	2,450
	2,723
Lizard direct to ditto - - -	2,695
A round of - -	28 miles by Great Circle.

Whatever may be prudent with sailing vessels, there is no reason why a steamer should not adopt the most direct course possible, which is that on the Great Circle, and to such a vessel the fogs and currents near Newfoundland would be comparatively no great obstacle. At Newfoundland a steamer might lay in a supply of coals for 550 miles farther voyage; and as it may be frequently of importance to the colony for the packet to call there, we may inquire how far out of the way to Halifax by calling at St. John's, Newfoundland.

To St. John's	1,652 sea miles.
To Cape Race	60
	1,712
Direct	1,694
A round of	18 sea miles, or 21 British.

If it was thought too great an interruption, we may call at Fermoez, which is only 20 miles from the Cape, and would be hardly any thing out of the way, or at Tres-passez, which is about as far to the west of the Cape, each of them being not more than three leagues off the direct course.

It has been proposed to sail from Falmouth by the Azores to North America; this may be equally as well done from Valentia, and with a saving of navigation.

Lizard	49°	57′	44″	M.P.	3,470	Long.	5°	11′	55″
Fayal	38	32	30	M.P.	2,509	„	28	43	0
	11	25	14		961		23	31	5

982723
149527
166804
249550
835691
085241=1,217+17=1,234 to Falmouth.

Valentia to Fayal and Azores:

Valentia	51	55=3,657					10°	25′	
Fayal	38	32=2,509					28	43	
	13	23	1,148				18	18	
			803						1,098

1,148 - - 059942
1,098 - - 040602
980660
141080
904716
045796=123 sea miles less navigation than to Falmouth, or 142 British miles, but 227 miles more of post route to London or Bristol, including 86 for Milford Passage. To Liverpool the quantity of navigation, adding the passage from Dublin, will be much the same, but there will be 120 miles less post road; and to Glasgow a saving of 104 miles of post route, and upon the whole 226.

Fayal to Halifax	1,607	Falmouth	1,607
Valentia to Fayal	1,111	Halifax	1,234
	2,718		2,841
Direct course	2,155		2,394
Round	553		447

The round is three days of a steamer.

Distances in British Miles:

Falmouth to Halifax (ordinary course)	2,775
Valentia to ditto by Cape Race	2,470
Less navigation by	305 miles.
London to Falmouth	269
Falmouth to Halifax	2,775
	3,044

London

573

London to *Valentia*.

	By Cork.	Milford.	Holyhead.	Liverpool.
	472	496	537	553
Halifax	2,470	2,470	2,470	2,470
	2,942	2,966	3,007	3,023
Saving	102	78	34	21

It is to be observed that a saving of 30 to 50 miles may be made in the Falmouth voyage by keeping nearer the Great Circle course to Cape Race; but it is uncertain for sailing ships.

It is upon the whole clear that the sea passage from Valentia to Halifax is 300 miles shorter than from Falmouth, and above 400 miles shorter than from Liverpool.

Halifax to the Northern Ports.

	By Valentia.	By Falmouth.		London.
To Bristol - -	2,822	2,931	Course of	3,164
Liverpool -	2,815	3,100	Foreign	3,252
Glasgow -	2,911	3,300	Mails.	3,452

So that the American letters from those ports are carried a round of 300 to above 500 miles. The passengers from 100 to 400 miles, and to have 300 miles longer voyage than by embarking at Valentia.

June 1829. *M. FitzGerald.*

Two Reports, very able and elaborate, have been made by the Commissioners of Revenue Inquiry on the subject of the English and Irish Post Offices. Those Reports comprehend the internal establishments and revenue. In the course of the inquiry a subject has incidentally arisen beyond these limits; viz. the postage on letters passing from these countries to foreign parts, and more particularly to our own colonies. The whole of this latter question is understood to be now in a course of inquiry before the Commissioners. However, as a complete correction of the whole system may be remote, it is respectfully submitted to the First Lord of the Treasury, that one particular branch may be considered as peculiarly deserving of His Grace's early attention; the more as it involves not only financial and commercial, but also political and military considerations. The branch referred to is the present mode of communication with our North American colonies. This subject in all its details will necessarily sooner or later be brought under the view of the Government. The present statement therefore, avoiding details as much as possible, would attempt to convey to His Grace the Duke of Wellington a summary of the principal circumstances resulting from the past and present state of the communication with those colonies, not from any doubt that His Grace is aware of the general importance of the question; indeed the Writer is sufficiently apprised of the contrary; but for the followig reasons:

1st. Because, although the last to be reported on, this branch, perhaps the most important, may not be treated in a political point of view by the Commissioners.

2dly. Because, independently of any general reform of system, a specific and immediate remedy can be pointed out for the particular case; and,

3dly. Because, in considering the evil and its remedy, many considerations which will not come directly within the province of the Commissioners of Revenue Inquiry, suggest themselves to the First Lord of the Treasury as affecting the question in the more comprehensive views of national economy.

1st. In point of policy, the inexpediency of having our intercourse with our colonies in any degree dependent upon a foreign state, need hardly be insisted on. Such inexpediency must be much aggravated when that foreign state is of a very commercial character, because not only political and ordinary correspondence, but commercial transactions in time of peace fall into a course which, in case of war, must be suddenly and inconveniently changed.

The degree to which England has become thus dependent upon the United States, not only in respect to all the intercourse with those States, but also with our own colonies, will, when known, astonish the public, and perhaps has but recently attracted the attention of the departments in this country. It is, to be sure, true that a King's packet has always sailed from England for North America and our Colonies, but until lately its course was by the West Indies and New York. On the absurdity of such a system it is unnecessary to dwell. A packet now sails for Halifax direct, the average arrival of which is two months. Such packets never convey original letters, mere duplicates or triplicates of commercial correspondence. All commercial and private correspondence between these countries and our colonies is conveyed by vessels belonging to, and built and manned by, subjects of the United States. All political and military correspondence requiring despatch passes through the same channel. This, in point of policy, is more preposterous, because Halifax is considerably nearer than New York, and because it must at all times have been a desideratum that our colonial correspondence should pass through the interior of our own colonies, not merely for the convenience and encouragement of provincial industry, but in order to reach the respecvtie seats of government by safe and independent routes. The more enlightened policy which now directs our Colonial Administration has recognized these views, by promoting the construction of roads for mail communication, avoiding the territories of the United States. The degree to which the commercial system of the United States is made

subsidiary to its State policy, and *vice versâ*, can only be appreciated by those who follow the combination through all its details. Its principle is unlimited aggrandizement through the means of monopoly and encroachment. With the ambitious character of the United States government, the present statement has however nothing to do, except inasmuch as it has contrived to draw within its grasp almost the entire of the intercourse with our own colonies, whether of correspondence or personal. The principal share of this species of commercial control centres in New York. Almost every point of America is more or less subservient to her commercial interests, and perhaps every merchant of that continent has correspondence with hers. Such ties, independent of the superior rapidity and accommodation of their vessels, induce almost all our colonists to touch at New York to and from Europe. Whether such dependence be or be not unavoidable (and mature consideration may suggest means of diminishing it, perfectly compatible with the most peaceful relations), at least it cannot be the purpose of the English Government to augment and strengthen it. That they do so, however, as long as they leave the communication through the King's packets so inferior to that by the commercial vessels of the foreign State (whether from an injudicious selection of the port of departure, or from other circumstances within their control), there can be no doubt. As long as the packets between Liverpool and New York afford the most convenient and quickest conveyance, personal and commercial interest will unavoidably give them a preference. The reciprocity of interest between Liverpool and New York, in maintaining this intercourse unchanged, and even unmodified, is fully known to both those great cities. The intensity of this interest will hereafter be more fully explained; but such an identity of commercial advantage will naturally overrule with the commercial body of Liverpool all views of national interest or general policy. At present it may be sufficient to lay down, that in maintaining the subserviency of the national and colonial interests to those of New York, Liverpool has but one feeling with New York, or, as was emphatically said by a very able American, "Liverpool is New York, and New York is Liverpool." It will hereafter appear not only that Liverpool has her immense interest in the direct trade with New York, but that by being the medium of communication with America generally, she obtains a relative superiority over every other port of the United Kingdom, corresponding to that which New York maintains over all rivals in America. But not only the parties directly interested in the packets above described, but the whole commercial and political influence of Liverpool, and its immense pecuniary resources, are wielded in perfect unity to counteract any the slightest change in a system which lays the general, commercial and political interests of the United Kingdom at the feet of New York.* But New York is the fountain head of the Anti-English policy, which professes to have no security for American independence but in the expulsion of English power from that continent. New York is perfectly aware that the superiority of our colonial harbours, the vast inland navigation of the St. Lawrence, the connecting canals now in progress, and the superiority of a ship compared to a boat navigation, will ultimately give us a preference of commerce upon the lakes and defeat their great enterprise, which sought to make New York the entrepôt of the Western States, by means of the Lake Erie Canal, and the "emporium" of America. If by availing ourselves merely of the natural advantages for a preferable communication between this kingdom and her colonies, this state of things may be reversed; if the legitimate internal revenue of our post-office can be enforced or extended; if our colonies can be conveniened in proportion to their nearness to the Mother Country; if inter-colonial lines of post-office communication can be facilitated and rendered productive; if all colonial correspondence can, without offence, be taken from the vessels of a foreign and jealous rival State, and conveyed in English vessels, not only more safely but profitably; if even a considerable portion of the United States correspondence may be attracted through the same channel; if the political and military intercourse with our colonies can, not only without additional expense, but with considerable saving, be placed on the best footing which the nature of things will admit of; are these not motives in common policy to make some effort on the part of the English Government, even though New York, through Liverpool, should grumble at such a measure of national policy? But if New York on the other side, and Liverpool on this side, should dislike any infraction of their monopoly, a measure dictated by national interest, would be hailed as extending impartial accommodation to the other great commercial towns of the kingdom; to Glasgow, to Aberdeen, to Hull, to Bristol, to Belfast, to Dublin, to Cork, and though last, not least, to London: whilst on the other side, Boston and Baltimore and Charlestown, and other great commercial cities, would gladly rescue themselves from the thraldom in which they are held to New York;† by which relief, not only their trading interests, but the revenues of their respective States, would be considerably advantaged. The advantages of dealing with a free port like Halifax are beginning to be duly appreciated by the independent towns of the United States. The fair policy of cultivating those distinct interest is obvious.

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* *Vide* Report on Lake Erie Canal, by the late Governor de Witt Clinton.—There is a copy printed in the Report of the Emigration Committee, under the title of "Reports from the Commissioners of Inland Navigation in America," in the Appendix.

† Whilst it was in contemplation to establish a communication by steam from the west of Ireland to Halifax, the most sanguine encouragement was held out from Boston; a Company was formed there of the most leading commercial men, who undertook the building of three steamers to meet the Company's vessels at Halifax; and the Legislatures of Canada and Nova Scotia made grants with the same purpose, to continue the communication by steam to Quebec.

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For any confirmation of this policy, the writer can confidently rely on the Duke of Wellington's general knowledge of our colonial interests, and on the opinions of Sir G. Murray, Sir James Kempt, Sir Howard Douglas, and our other governors.

2dly. The decided preference of communication with America, amounting almost to monopoly, enjoyed by Liverpool, arises from the combination of personal convenience with the "course of trade."

The New York packets, of which there are three distinct lines, viz. a weekly packet, a fortnight packet and a monthly packet, convey choice goods as well as passengers. They are very fine sailing vessels, with excellent accommodation, supplied with French wines duty-free, and every comfort. The persons who generally cross are more or less commercial; they make their last arrangements of business at Liverpool, and make their passage with the advantage of society. A return obtained through the Treasury, made the number of passengers leaving Liverpool by those vessels in the year, between 5,000 and 6,000, thus giving an annual average business of above 11,000. The cabin charges are 35 guineas. From a similar return, the number of persons who sailed by His Majesty's packets from Falmouth for all parts of the world, amounted in the year to 240. Yet Falmouth must be considered the best English station for a packet to the westward. The King's packets are very well found in every respect, and afford excellent accommodation. It is, however, pretty obvious that for a passage to America they cannot compete with those from Liverpool. A Nova Scotian returning from England will sail from Liverpool, and find his way from New York to Halifax. All the Canadians pass to and fro through New York; but in order to justify the continuance of the King's packet between these countries and our colonies, it should be put upon some footing which may enable it to carry letters; and surely it is desirable that its expense should be diminished by encouraging passengers to make use of it, and by rendering it subservient as far as possible to Government objects. But to carry letters and passengers, it must obtain a decided average superiority over the New York packets. Such superiority could not be obtained by a King's vessel sailing from Liverpool; the Americans can build cheaper, sail at least as well, furnish supplies on much cheaper terms, and above all, by carrying freight of commerce, can tempt a passenger by conveying his choice goods at a low rate. To create a competition at Liverpool, would be, therefore, incurring the expense merely for competition sake, with a certainty of being beaten. To enable a King's packet to succeed in carrying letters and passengers, it must carry both more expeditiously and the latter as cheaply, and if that superior expedition be combined with much greater safety, the King's packet will by the very interests of commerce, take away letters altogether, and passengers in a great proportion from the New York vessels. The means of obtaining such superiority for a King's packet are pointed out by geography and by experience. Now that the islands are united, geography would say, connect this kingdom with its colonies by the nearest points which are suitable. Now that the revenues of England and Ireland are consolidated and its post-office establishments about to be identified; now that lines of mail-coach roads reach the extreme points of the kingdom, it surely becomes advisable that such great public works should be rendered available towards the general revenue of the State. It is self-evident that the longer the line of internal conveyance over which any given letter passes, the more it pays to the post-office revenue. Provided a letter proceed in a direct line of its destination, it is the interest of the writer, both for rapidity, certainty and safety, that it should move as far as possible by land instead of by sea. If on the average transit considerable reduction of time can be obtained, every commercial man would willingly contribute an increased taxation on his letter; indeed there is no imaginable taxation which a merchant would not in common sense incur, to insure superior despatch. But His Majesty's mails can now reach the extreme west of Ireland at the rate of 10 miles an hour. A letter for instance from London by Holyhead and Dublin, at present reaches Valentia in 92 hours, from which may be deducted 10 hours' delay in Dublin and 12 at Tralee; so that a letter in ordinary rate can reach Valentia in 70 hours. The route by Bristol and Cork is 65 miles shorter; either line may be considerably abridged. But when placed at Valentia, you are geographically speaking 10½ degrees west of London, 5 west of Falmouth, and above seven west of Liverpool. But these geographical parallels afford inadequate data for comparing sailing distances. The experienced American captain considers that when he has reached the parallel of Valentia from Liverpool, nearly half his time and all his danger is passed. His great delays and dangers are in the Channel navigation. We will, however, only assume one-third saved. The average passage of the New York packets, out, from land to land, is 41 days, and from New York to Liverpool is 25. One-third deducted would amount to 13 days 16 hours, which would be saved on the outward passage, and 8 on the homeward. Allowing 36 hours for the conveyance from Liverpool to Valentia, the difference on a Liverpool letter would be above 11 days out and above 6 days home. But from all other parts the difference would be more considerable, which superiority would necessarily command all correspondence. There can be no doubt that the time allowed of 28 days out and 18 home would be ample allowance for average voyages between Valentia and New York. But by the supposition, we have nothing to do with New York. The passage would be between Valentia and Halifax, and the calculation is only introduced to show that United States people from several ports, especially Boston, and all our colonists, would find a decided advantage in preferring the King's packets. All commercial correspondence would be insured. It is supposed that 7,000 letters per packet leave Liverpool for New York. This comprehends all the English and a great deal of continental correspondence. But nearly the whole of it escapes the internal postage, being customarily conveyed in packets or boxes to

Liverpool. By an arrangement which should secure to the King's mails an unquestionable priority of delivery in America, all the commercial correspondence of the United Kingdom would be necessarily attracted to that channel, and it is worthy of consideration that almost the entire of it would pay long lines of internal postage. There is good ground for believing that the same cause would draw into the King's mails a great mass of European correspondence which now passes by other ways. Every passenger likewise who has regard to his comfort and safety would prefer the shortest passage of the ocean. The direct sailing distance saved by starting from Valentia would be above 300 miles compared to Falmouth, and above 400 compared to Liverpool, that is, 600 and 800 miles upon the voyages. But when the delays within the Channel from winds and especially from currents be considered, the average distance would be more than doubled, and the wear and tear of 600 or 800 miles per passage would form a serious amount in the expense of a packet. The remedy proposed is, that the North American packet should sail from Valentia. The internal effect on correspondence would be, that letters from every commercial town in the kingdom could travel by mails, directly in the line of their destination, with the greatest possible expedition; and thus the advantages of commercial communication be fairly and impartially distributed over all points, according to their relative situations. A letter from Glasgow would move by Belfast and Dublin to Valentia on the shortest geographical route to North America. So, a letter from Bristol by Cork to Valentia, a letter from London either by Bristol or Holyhead. On the return of correspondence, by the establishment of a post-office at Valentia, letters of commerce might be speeded directly to their respective destinations, to the great convenience of commerce and improvement of the revenue. At the station proposed, no harbour expenses would be to be incurred. A packet could always lie afloat and be at sea at once. The total outlay would be in an office for a post-master. It is respectfully submitted therefore, that by the transfer of a North American packet from Falmouth to Valentia great practical benefit would be derived, in point of commerce, of revenue, and of political intercourse with our colonies.

The particular harbour is pointed out on the grounds of its being the most westerly, the most accessible, and the safest.

3dly. If the advantages previously pointed out be admitted, they would justify, on the part of the Government, a very considerable expense. It is, however, demonstrable that they would not be productive of expense. The difference of wear and tear, of time, and of casualty, between Valentia and any English harbour, would constitute a very large item of saving. In point of danger the difference is so great, that a commercial vessel sailing from Valentia, would hardly think of insuring, except for what it might incur at the other side of the ocean. The proposition, moreover, is to convert an unproductive into a productive packet; unproductive either in letters or passengers, into one productive in both, and leading by the change to a great increase of the internal post-office revenue. It is confidently asserted, that a majority of the passengers of the better class, between America and Europe, would in such case avail themselves of the King's packet. Twenty guineas passage from Valentia to Halifax would pay better than thirty-five from Liverpool to New York. The journey from Liverpool to Valentia would be under 5*l.*, and from Halifax to New York much less; so that an actual saving would be made to passengers. A mercantile man proceeding from Liverpool, and having taken freight from thence to New York, would generally have an advantage in preceding the arrival of his cargo; and thus even the interests of commerce would tempt passengers from the New York traders into the King's packets. But the benefits of such superior rapidity would tell upon the colonial postage, and insure a revenue on the Canadian and New Brunswick correspondence, by the lines of road now constructing in those provinces between Halifax and their respective capitals, rendering the whole independent of the United States. It is evident therefore, in a post-office point of view, not only a saving would be effected, but new sources of profit created.

The Duke of Wellington will naturally take into his view other important sources of economy, to which the measure proposed may be made instrumental. It would be important to ascertain what may be the ordinary expense of reliefs and detachments going to and from our North American Colonies? What the average time in which they are conveyed? What the sickness and losses consequent thereon? What the average time lost at places of embarkation in England before vessels can sail for such purposes.

No one can so well as his Grace appreciate the benefits of an improved system for the periodical transport of soldiers between this kingdom and its colonies. By the proposal, troops in divisions or detachments would pass in the shortest practicable time. It may be safely calculated that in the average troops could be delivered, if expedient, from Ireland to Halifax in 24 days, and conveyed home in 14. In time of war the proposed packet line would be wholly out of the range of enemies' cruisers, and even if casually met in the ocean, the packet would derive advantage from having troops on board, which would probably be the case in general, from the frequent passage of detachments. It is further suitable to the routine of service that troops should embark from Ireland, and advantages would be derived to military arrangements by vessels sailing at stated periods. Some further considerations respecting this part of the question are respectfully submitted to the Duke of Wellington in a separate statement.

All reference to the comparative merits of steam packets and sailing packets, for intercourse with Halifax is omitted in the preceding argument, because that question depends upon other considerations. If, however, steam should be preferred, as the principal difficulty consists in the conveyance of fuel, no doubt can exist that the passage should be abridged as much as possible, and that the danger of currents which embarrass steamers in the lower parts of the Channel navigation should be altogether avoided. If the Government should

once

once give a right direction to the colonial intercourse by selecting a proper packet station, and should then prefer to contract for steam vessels, no doubt private enterprise would be found ready to undertake it. It is, however, probable that on full consideration of the case in all its bearings, the Government will deem it its interest to effect a colonial steam connexion by an independent establishment.

The question whether a foreign post-office should be in London, or in each case at the most convenient port of departure, is an important one, and will probably ere long be fully considered with advantage to the revenue. But the more limited question, whether an American post office should be in London or at the most convenient port of departure will not admit of doubt. It may be thus illustrated.

A letter destined for the United States or our North American Colonies, in order in the one case to reach Valentia direct, in the other to reach the same parallel of longitude *viâ* London and Falmouth, merely stating the specific comparative distances in each case, viz.

	Miles.		Miles.
From Liverpool to London	206	From Glasgow to London	405
From London to Falmouth	269	From London to Falmouth	269
Falmouth to parallel of Valentia	300	Falmouth to parallel of Valentia	300
	775		974
Liverpool to Valentia direct	345	Glasgow to Valentia direct	441
Difference	430	Difference	533

	Miles.
Bristol to London	120
London to Falmouth	269
Falmouth to parallel of Valentia	300
	689
Bristol to Valentia direct	352
Difference	337

These differences would be doubled in the correspondence and the difference of time. Comparing sailing with mail-coaches, would be in a much greater ratio; hence a foreign post-office in London never can obtain American letters; they will always go by the merchant ships in preference. The measure of the direct lines to an American post-office properly placed, would be a measure of the increase of the post-office revenue; *ex. gr.* every letter from Liverpool would pay 207 miles of internal postage.

June 1829. *M. FitzGerald.*

AN ABSTRACT of some COMMUNICATIONS made to His Grace the Duke of WELLINGTON in the year 1829, relating to PUBLIC WORKS in *Ireland.*

THE general opinion has long demanded reformation of the system under which Public Works have been administered in Ireland.

Public Works as hitherto conducted in Ireland may be classed under four heads.

1st. Such as have been constructed by special grants from Parliament.

2dly. Works undertaken by the authority and at the expense of the several Revenue Departments heretofore existing in Ireland.

3dly. All works executed under Grand Juries.

4thly. Roads and Bridges constructed under the direct authority of Government by public engineers.

There also existed a temporary authority in the late Fishery Board, to aid in the formation of piers and harbours. Private Acts of Parliament are likewise occasionally obtained for similar objects. In each of these several branches, except the 4th, considerable abuses have been acknowledged to exist.

Parliamentary grants seem to have been made with shameful ignorance of their objects and a prodigality of expenditure only to be rivalled by the insufficiency of their maintenance; most of such works accordingly no longer exist.

The wasteful expenditure in revenue buildings and other works under the old Board need now only be adverted to as warning for the future.

The largest and most important branch of expenditure on works is that under the Grand Jury Laws.

The uncontrolled power of taxation vested in Irish Grand Juries, not justifiable on any sound principles, has led in practice to abuses which have excited general complaint.

The power exercised by an irresponsible and single body, not necessarily involved in the taxation it levies, must in its nature have been abused. The amount of money levied in the last 30 years by grand juries must exceed 18 millions; an immense sum, which, judiciously and economically applied, would have advanced Ireland to a high degree of improvement.

No doubt grand jury expenditure has afforded fine main lines of communication, and the cross roads are better than those of more advanced countries; but the result leaves an impression of extensive misapplication of the fund. All roads under grand juries could be better and more economically made and repaired. The management of bridges is still more

more defective. It may be admitted that within the last few years, from the improved mode of selecting sheriffs, grand juries have been more impartially constituted, and their powers more creditably administered. But in the system itself there are inherent defects, beyond the correction of grand juries, however well constituted or disposed. These principally arise from ignorance and temptation to corruption in the parties employed.

The exercise of those powers by grand juries clashes and interferes mischievously with their proper functions as part of the criminal judicature of the country. But supposing sufficient leisure during an assizes, which is not the case, the subjects to be dealt with being strictly of a professional nature, requiring a knowledge of engineering, are beyond the competence of country gentlemen, however respectable. A public work being thus adopted in ignorance, its execution is devolved on still more incompetent parties.

The execution of a new line of road or the construction of a bridge is committed to some farmer enjoying the patronage of a grand juror; if more skill is expected, it must be from the employment of a regular road jobber. No adequate check is applied either to the execution or accounting for the work. As is customary in Ireland, an *affidavit* is substituted for strict investigation of the essential parts of the transaction. Nearly a million of money is levied annually by grand juries, of which three-fourths may be considered applicable to public works and charities, no part of which, either in the estimating, the execution or the accounting, is controlled on any rational principle. In one essential point, namely, the employment of human labour, the practice under the Grand Jury Laws is strikingly deficient. A sum of nearly half a million, annually applicable to "Works," ought to employ many hands. It would seem as if the operations of overseers under presentments were conducted with the least possible amount of human labour; their interest prompts a preference of machinery as far as is practicable. These abuses have called forth animadversion from almost all authoritative bodies; the judges on circuit constantly complain of the abuse of the power of grand juries, and the insufficiency of legal control on those powers.

The laws and practice have been subjected to investigation by successive Committees of the House of Commons; a reform of the system has in all cases been recommended, though no sufficient specific remedy has been pointed out. Grand juries themselves, by calling on the Government for interposition through officers of its own appointment, acknowledge the expediency of some change in the mode of conducting public works. Considerable difference of opinion exists as to the policy of continuing in grand juries the powers of taxation; it will however on all hands be agreed, that if they are to be continued, some more effectual checks should be put on their administration; the evils of the system are not limited to its administration; the taxation is levied in violation of all sound principles.

It is a land-tax levied on the occupant, without reference to the value of his interest; it is grossly unequal in the assessment. The mode of levy admits of fraud and partiality; the owner of the land, except inasmuch as he is also an occupant, escapes the tax altogether. It acts as a premium on non-residence in great proprietors. No qualification of property is required for a grand juror exercising unlimited taxation; in fact, a grand jury might consist of persons not holding an acre of ground in actual occupation, authorized to tax every acre of a country *ad libitum*. This is an extreme case, but it is certain that the taxation by grand juries is viewed as a fertile and odious means of jobbing and extortion.

The habits arising from the abuse of grand jury patronage are peculiarly calculated to degrade the gentry in the estimation of the people, and to corrupt the lower classes concerned in the execution of the works.

The fourth expedient, viz. the employment of Government engineers to execute particular works, has been attended with signal advantage. Many barren tracts of country have been opened up by lines of communication, enhancing greatly the value of property, and exciting new sources of independent industry. Those works undertaken in reference to local distress and particular emergencies, have been attended with permanent benefit to the country; facilities have been afforded for the diffusion of the inexhaustible natural manures so profusely furnished throughout Ireland; the habitations of the farmers have been improved, their comforts increased; a gradual accumulation of farming capital is taking place. These salutary effects from a judicious execution of public works are developed in the reports of the engineers employed under the orders of the Marquis of Wellesley, Messrs. Griffith and Killaly in the South, Mr. Nimmo in the Connemara District, and more specifically in that of Mr. Kelly, employed under Mr. Griffith in the completion of those grand lines which traverse the large tract, previously inaccessible, which lies on the borders of Cork, Limerick and Kerry.

Such was the advancement of individual prosperity amongst a population theretofore idle, dependent and turbulent; even before the works were completed, so intensely were the people employed in their works, that he could not procure them to work for the public, although at the commencement he had been overwhelmed with demand for employment.

Here was a fund of independent industry, created as it were through a district of 640 square miles, which may maintain and occupy its population for a century. With such improvements the interests and exertions of landlords will go hand in hand. But although those expedients for occasional employment have been attended with more than temporary benefit to the country, they can never be safely contemplated as furnishing a permanent system for the management of public works.

The employment of civil engineers on their own responsibility, both to advise and execute, and also to account for public money, is not admissible either on sound general principles or on reference to the practical objects in view.

Engineers

Engineers are essential to any efficient system, but they must be confined to their proper sphere; their *time* would be sufficiently occupied in planning, estimating, inspecting works in progress, rigidly scrutinizing execution; they should not be contractors nor accountants, but used as a necessary check on both. No argument can be drawn for the skill and integrity of individuals in the adoption of a general system in which an organization of checks on every department affords the best chance of perfection. It is further highly inexpedient that the authority to execute works at the public expense should attach to any individual political officer of the Government.

Such officer cannot have leisure, and probably not the qualifications, for so peculiar a department, and if concerned in patronage, would unavoidably be accessible to political influence.

The real authority would in all such instances vest in the engineer. Moreover, nothing can be more desirable to the Government than to be exempted in its political capacity from a responsibility which it cannot exercise with credit to itself or advantage to the public; therefore, if the Government is to act in the case, it should be through some competent and responsible department.

In considering what system it may be desirable to adopt, reference should be had to our past practice, in order to avoid acknowledged errors and abuses. It is evident, that in no branch of our public works has due precaution been taken, by deliberate inquiry beforehand, to establish the utility of works; neither has sufficient skill nor economy been used in their execution, nor has the expenditure been subjected to sufficient audit.

In the Parliamentary grants, the purpose was political favour and patronage, rather than utility, and in consequence some of the works have ceased to exist (as the harbour of Rutland, in Donegal), and others are unproductive. Our principal canal stands, a model of ignorance and wasteful misapplication of money. The formation of mail-coach roads under Mr. Forster's Act, though affording in the end fine lines of internal communication through Ireland, was originally conducted without sufficient previous examination of the country, and without adequate checks on the execution.

New surveys in consequence became necessary in many instances; extensive alterations of lines were made at considerable expense, and the execution of the works was in others so faulty, that entire lines required to be made a second time. No reasonable mode of account was applicable to this expenditure, and the vast sum of 439,000*l.* was discharged on the mere affidavits of "overseers."

In the great national works, such as Howth Harbour, fatal errors have occurred from want of sufficient previous inquiry; in that instance half a million has been expended with little advantage of convenience or safety. After inclosing a basin, it was found necessary to excavate from the solid rock sufficient depth for mooring vessels. It is understood that the harbour should have been to the southward of what is now the southernmost breakwater; all this would have been obviated by a more accurate previous investigation and by consulting mariners.

In such cases, as well as in the application of aids from the consolidated fund and other grants for public works, the authority has been vested in occasional commissioners, very respectable, probably, but wholly incompetent to the administration of such a difficult task.

The execution, therefore, depends on the skill and integrity of the engineer. Civil engineering has made rapid progress, and is carried to great perfection in Ireland. Country gentlemen, conscious of the inefficiency and abuses of the old management, have sought to obtain the aid of engineers in almost all considerable undertakings under grand juries, and applications have extensively been made to Government for the appointment of "County Engineers."

The works carried on in the distressed districts have further established the preference for the employment of professional engineers.

On a review of the practice in Ireland under these several heads of expenditure, it is evident that no well regulated system exists for the administration of public works. The principles which should regulate public aid for such purposes, may be thus stated:

1st. There should be a deliberate preliminary examination of the grounds for any application for public money; the work proposed should be considered not merely in reference to its particular utility, but in comparison with other works suited to the same end, for which competition should be encouraged by publicity.

2dly. When the proposal of a work is deliberately sanctioned, the plans and estimates should be subjected to a further publicity and competition.

3dly. The entire progress of the execution should be placed under a responsible inspection, and accompanied by a concurrent account.

4thly. The completion should be strictly ascertained, and the preservation and maintenance of the work should at once vest in some defined and responsible body.

None of those principles have been hitherto applied on the part of the public to the management of works in Ireland; yet a private individual would be deemed imprudent who involved himself in an expensive undertaking without some such securities. Even limiting our views to the existing expenditure on public works, it appears that some direct interposition of Government is necessary. A sum equal to nearly one-fourth of the entire revenue of Ireland is levied by a direct tax on land, without any reasonable check as to the efficiency or economy of its expenditure; this, which is viewed as a fertile source of abuse, might, under an improved system, be rendered an efficient instrument of national improvement. It forms a serious item in the resources of the country, and should not be suffered to run to waste.

If such interposition be required even under the present system, it becomes still more necessary in reference to the prospects before us. It is required for the "*employment of the people.*" It may be said, and it is said, that in such matters the interposition of Government is unnecessary and mischievous; that if there be redundancy of labour, capital will find its way to correct the inequality, and that private speculation will afford the remedy. To this philosophy it is a sufficient answer, that Ireland, neither in individuals nor in communities, possesses capital for such purposes; that political considerations impede its introduction from England, and therefore, that such abstract principles, however efficacious in England, amount to an interdict on improvement in Ireland, Is it justifiable of the Government to abandon this great subject to chance?

No doubt can exist, that on the model of the Roman Law, the Sovereign exercised the duty of constructing and maintaining the internal communications, such as they were, and some of these formed by the Romans remain extraordinary examples of elaborate construction of strength and durability.

The construction of castles, of harbours and ports, was distinctly among the duties as well as prerogatives of the Sovereigns in these countries, and the taxation for those purposes was part of the "trinoda necessitas," from which no species of property nor rank of persons was exempt; it was by statute that the powers and duties of forming and maintaining roads and bridges was devolved on local authorities. By the 22d Henry VIII., roads were devolved on parishes, and bridges on counties; so likewise the rights of the Crown in ports and harbours were from time to time granted and assigned to corporate bodies for their *custody and maintenance.**

In Ireland sufficient authority was vested in grand juries for the construction of roads and bridges; but for the construction of ports and harbours no adequate powers seem to have existed in any body. Occasional grants from Parliament have consequently in all such instances been resorted to. We may except the very limited authority before adverted to as vested in the late Board of Fisheries; yet nothing was more important to Ireland, nor is any thing still more wanting than the construction of havens and ports. To the effectual means afforded to Scotland for such purposes, may be traced much of the rapid progress of that country in improvement. The various and complicated evils arising from deficiency of employment for the Irish population, has at length attracted the attention of all reflecting persons; it is an evil frightful in itself as affecting the internal condition of Ireland, and its baneful effects have gradually extended themselves in a degree seriously injurious to the working classes of England.

A change then becomes indispensable, and that which public clamour would indicate is, at least, "some modified system of Poor Laws" for Ireland; to this point it is now attempted to direct all the prejudices of England, and in Ireland it will be made a topic of popular excitement by persons who do not desire to succeed in accomplishing it.

It is incumbent on those who administer the government deeply and cautiously to weigh all the circumstances which are involved in this subject, before they concur in adopting for Ireland a system, under which, in the opinion of some of the wisest men, the prosperity of England is breaking down; which, if suitable to England, is, of all countries on earth, least adapted to Ireland, and the administration of which would, in the existing state of that country, be utterly impracticable.

If according to the modern construction of the English Poor's Law, a right were created to *demand* labour or support, millions in Ireland would at once throw themselves "on the parish." Every evil which arises in England would be tenfold aggravated in the execution of such a system in Ireland. Mr. Peel was perfectly right in saying that "Ireland did not possess the machinery for Poor Laws."

To a person really understanding the question, it is not difficult to demonstrate that Poor Laws would neither remedy the miserable condition of the population of Ireland, nor diminish the migration of Irish paupers to England. The most plausible shape in which the Poor Law can recommend itself is a provision for the "aged and infirm."

Nothing can be more pleasing to the benevolent mind than to realize the purposes of Providence in aiding those that are not able to labour for themselves.

But in a political society, the first question is, does a necessity exist for such a legal provision from the state? If there does not, should we seek to disturb the habit of society in that respect? The purpose could only be to apply the supposed relief to the lowest class of persons.

Many circumstances demand consideration before we meddle with the existing state of things in this respect.

1st. There is in the native Irish character the strongest possible attachment to "*kindred*;" such a case is rarely known as the throwing off or neglect of an aged or infirm relative; we should pause morally before we cut upthat instinct. Nothing can be more interesting and amiable.

The collection of all ages in an affectionate family circle affords no mean mitigation of sufferings, physical and moral, in the impoverished state of the lower class of Irish.

2dly. To those who have penetrated the real life of those poor people, it is notorious that the counsels, the admonitions, the natural prudence of the aged, exercise a salutary influence on the younger members of families, brought up generally in a spirit of obedience to parents. The loss of such influence would be mischievous.

3dly.

* It may be further stated that it is to the interposition of Government, and to the wise acts of some of our greatest Kings, to an advance of public money, and to the creation of establishments, that we owe the origin of some of the most valuable manufactures in England.

3dly. Although the appearance of the poor in Ireland is miserable, yet in the essentials of food and fuel, there is seldom so much want experienced as that appearance would imply; nearly sufficient food may be provided by each family, under favourable circumstances, for the year's consumption;* and *hitherto*, with exception of the great pasture districts and some others, turf has been abundant, more especially in what are esteemed the poorer counties of Ireland. Whatever philosophers may think of the potatoe as food, the Irishman likes and thrives on it; it makes him strong and healthy; he not only prefers it to oatmeal, but has changed from one to the other on comparison. It is a wonderful circumstance, that the whole pauper population of Ireland can thus, if fairly treated, produce their own food independently of markets and employment; and it is a most gratifying consideration, that if landlords shall act wisely, that class may be placed at once in possession of great comfort and abundance, produced by their own labour, not only without burthen either to landlord or the state, but actually contributing surplus produce for rent.

This position is asserted as the result of experience; but without taking credit for prospective improvements, it may be questionable whether, even at the existing minimum of comfort, it would be desirable to transfer the aged and infirm pauper from his family cabin to a *public establishment*. It cannot be supposed that in such a public establishment the pauper would be raised, in point of food, above the industrious class from whom he is withdrawn; in other words, above his natural level. As in point of lodging and clothing, he would be better off, if in food also, it would act as a premium on poor-houses, and obvious abuses would grow out of it; for instance, idle people managed to get into *gaols* for the winter, tempted by the *white bread* diet, which (in the former laxity of prison discipline) they contrived to sell for *whiskey* and *potatoes*. But the object of such a charity would not be merely to afford better "clothing and lodging" to the "aged and infirm," leaving their food on a par, but *on the whole* to improve their condition. That is a complex purpose; it must include a deference to the feelings of the parties themselves, as well as our abstract notion of melioration. We must, in meddling with Ireland, be cautious about theories and comparisons with other countries without intimately knowing the people.

It is to be hoped that we are in no danger of making experiments on the theories of those who, like Mr. Owen, propose to incorporate people in communities of property and occupation; it is obvious that their principle is in direct opposition to the established as well as the natural domestic condition of families; and in reference to Ireland in particular it may be assumed that such breaking up of domestic habits would be repugnant to the national taste.

The domestic affections of the Irish are very ardent; the attachment between husband and wife most affectionate; and marked, if not with peculiar, at least with exemplary fidelity. The ties between parents and children, and grand-parents and grand-children are of the most intense nature, they appear not to be weakened by time or distance; to sever those ties by placing the aged in "poor-houses," would seem a cruel officiousness, if not very urgently called for; indeed so far from desirable, that, abstractedly speaking, the happiest arragement of society would be to inspire such feelings into families if we did not find them ready made by natnre. That being the case it is obviously the duty of a statesman to accommodate his system to those properties of Irish character, and instead of taking the aged and infirm from their families, to seek to render the working families better able to support their aged and infirm members *at home*.

The State cannot pursue a wiser policy than to meliorate to the utmost those "homes," and to cherish and cultivate the associations of kindred. Again, the domestic associations of Ireland encourage religious impressions. The people are naturally devout, and perhaps in no country in the world does there exist more enthusiastic excitement in the performance of religious observances, nor any people to whom infidelity or irreligion is so uncongenial. This religious influence is promoted by the affinities of the old to the young. He who cannot trace the crimes of the lower Irish to the artificial influence of a perverted state of society has but superficial qualifications for legislating for that country, and he must little understand human nature who cannot recognise in the Irish fine materials to work on for every moral and useful end. Poor Laws, however, would not be the proper means; they would foster idleness and instil selfishness; they would mar the virtues and aggravate the vices of the Irish character; the question then would rather seem to be, can the Irish peasantry support the aged and infirm of their families?

The answer is, if for the last century of wretchedness they have contrived it, shall we not under a greatly improved condition calculate confidently on their doing so in a manner more tolerable to humanity?

It is advisable to consider in a more practical manner the actual condition of the lower class. It was not customary for landlords to let directly to the poorest class; they have generally been the under-tenants of under-tenants; their rent is in such cases the sum of the several rents above them, with the overwhelming addition of the "*Cottier's Rent*," which means something above the power of human industry to pay; to the utmost they *work it out*, but must still always be in the power of their "masters." They are slaves, and treated as such. The principle of the tenant immediately above them is *not to improve their condition*.

They are generally placed on the verge of a high road, as most convenient for collecting manure for their "garden," for stealing and for begging; the victims and the examples of sub-letting.

Nothing

* This of course applies only to cases of liberal treatment towards the small landholders. The most miserable class are subsequently treated of, and the cases of towns must be dealt with separately.

Nothing can be more miserable than the huts they inhabit or the rags that cover them. The traveller usually reproaches the "Irish Landlord" with this exhibition of barbarism; and certainly, though not the immediate instruments, the landlords are hitherto fairly chargeable with too much indifference to their fate. If these poor creatures have an acre of ground, they nevertheless eke out their own food. We must add the large body of trading mendicants, who find it more profitable to beg than to work; and this, perhaps, if it were otherwise justifiable, forms the only pretext for a Poor's Law like that of England.

It has been calculated that mendicancy costs Ireland a million and a half. But for the evil of pauperism in both those shapes remedies are discernible in the state of things before us, and may be materially promoted by the measures of Government.

First, It is desirable as far as possible to mitigate the general tendency to get rid of subtenancies.

The remedial course which humanity and policy equally recommend, would be the planting of the poorest class of dispossessed tenants on small holdings of land immediately under the head landlords, or placing them in improved villages, with potatoe ground contiguous, and common pasturage; in either case, the lot of such poor people is easily and greatly improved. More permanency of possession and more reasonableness of rent would naturally follow such a change, and as such small holders are ready to pay a higher proportional rent than the larger farmers, it is no great stretch of confidence to believe that a landlord, finding himself able without pecuniary sacrifice, by a mere arrangement of property, to enhance the value of his remaining lands, and contribute to the peace of the country (which is in itself an item of economy), will lend himself to his own and the public interest in those respects. Further, have we not reason to hope that higher motives will very generally actuate the principal proprietors to ameliorate the condition of the poor? That they can easily and cheaply do so, is demonstrable.

Such are the obvious tendencies of the present day, and Government has only to favour and not counteract them. It is perfectly possible that in a few years the lowest class of Irish may be placed in a state of security and independence for food, beyond that of any other portion of the working classes of this kingdom; the change taking place is extensive and important, and will ultimately work for good; it relates to the class of smaller farmers, as well as the pauper population; but it is with the latter only that the State has to deal.

The Irish peasant understands potatoe culture, but little else. Much pains are taken by societies and individuals to instruct him in the method of furnishing for himself those accessories on which his comforts will depend. A landlord who chooses to give (quere) three acres of ground to a family for 20*s.* an acre, and build a comfortable house, the expense of which, on an average, need not exceed 40*l.* (and for which house he will readily be repaid 10 per cent. on the expenditure in rent) places one family in a situation to command abundant food, keeping two or three cows, several pigs and some sheep (provided they are all in house), and to proceed to a gradual enrichment of his ground, to a degree that would render it garden soil of the most fertile quality, annually augmenting in productiveness. Such is the palpable interest of landlords and tenants. While this reformation is *in transitu*, the Government can aid and facilitate it, by devising labour for the surplus poor thrown on the public market for employment, which will give time to landlords to complete arrangements requiring for the execution more capital than they can at once command, and which to be effectual must be gradual.

Nothing can be more absurd than the estimates of expenditure on cottages for the poor made by benevolent societies, &c. A house and suitable offices for a pauper family is made by one of them to cost 18*l.* This is all done in the greatest ignorance of facts; that sum would on an average build four excellent cottages, with suitable offices. But however desirable it unquestionably is on principle, that the aged and infirm shall be supported in their respective families, it cannot be denied that that description of persons is a burthen on the industrious, and as far as is possible without violating principles, the pressure of that burthen should be mitigated.

If a direct provision were allotted for them by law, much imposition and abuse would inevitably creep in, but with a well-regulated system of public works, it would be easy to afford through the public officer, an augmentation of wages or a preference of employment in consideration of the number of aged and infirm with which any poor family was encumbered. Such relief, however, in all cases to be administered through the medium of labour.

But although the Poor Laws may not afford the remedy, some corrective of the admitted evil is necessary; it is impossible to contemplate the mass of unemployed population in Ireland without alarm as well as commiseration. The impression is irresistible that such a multitude in misery and want, if not made available to the service of the State, must be dangerous to its security. Even if it were not justifiable in principle or experience, and from the example of other countries, that the Government should interfere, (and it can be shown that in all these respects it is justifiable) the case of Ireland is peculiar, and must be dealt with *per se*.

The root of the evil is absenteeism; 20 years ago Mr. Forster estimated the absentee income at three millions; it must now greatly exceed that amount. The perennial abstraction of so large a proportion of the national income must impoverish the classes dependent on labour, in the same degree in which its expenditure, dispensed by resident landlords, would vivify and nourish domestic industry in its various branches.

The accursed doctrine, that the absenteeism of proprietors is corrected by "balance of trade," will not impose on any practical man. If any man doubt, let him look at Ireland. But not only is the Irish aristocracy generally absentee, but after their example, the principal

cipal and many of the middling gentry, *all who can afford it*, generally leave Ireland for a part of the year, and in that absence spend the greater part of their income. There are some honourable exceptions; but amongst those habitually resident, there exists a lamentable deficiency of means to give employment, even if the country gentlemen were by taste or habit agricultural. The principal capitalists concerned in farming, however, are graziers, who employ no labour beyond that of a few herdsmen, even for thousands of acres. The tillage of Ireland, generally speaking, is conducted on small farms, and managed chiefly by the sons of the farmers. It consists principally of grain crops and potatoes. Green crops are rarely cultivated. We may travel a hundred miles without passing a turnip field.

There is accordingly very little *summer* work; the hay harvest is as late as the farmer can make it. The potatoes and oats being in the ground and his turf cut, Paddy, having some months at his disposal, passes over to England for a few pence, works at the hay and corn harvests, and returns to Ireland with a new suit of clothes and 6*l.* or 7*l.* on the average in his pocket. This is altogether a lucrative transaction. If, as has been said, 50,000 men migrate annually in this way, here would be a clear gain of one-third of a million to Ireland, and the food of that number saved for three months. Why should Ireland seek to check this migration? the temptation of much higher wages and better living is irresistible. Paddy says that "all the wheat, and the beef, and the butter and the pigs, and the gentlemen are going to England, and by ——— he will follow them," *and we may add, "no blame to him."*

There are a great number who pass over to England with a view to permanent employment. It is calculated, that in London there are 150,000 conducting themselves with exemplary obedience to the laws, and performing all the hardest work with the most meritorious industry. An annual influx also takes place of several who intend to be sent back at the expense of the parishes.

England pays nearly 100,000*l.* annually on this score; 12,000 paupers have been passed back from London alone in a year.

During their residence, the mode of living of the Irish enables them by competition to lower, in an injurious degree, the wages of labour, and thereby severely aggravate the pressure of poor's rates. It is not, therefore, at all extraordinary that loud complaints should exist on the part of the English landholder. But what is the remedy? The law can afford none. *Employment at home*, and nothing else, can relieve England and Ireland from this common evil. But although absenteeism be the cause, residence cannot be compelled, and the relief must be obtained from taxing the land of Ireland for the support of its poor. An *exclusive* absentee tax is not easily practicable, and in order to be effectual must be attended with so many modifications as to be complicated and inquisitorial. Besides there can be no reason why land generally should not pay for the employment of the people; if that be not done in the voluntary arrangements of society, it is imperative on the State to devise means to effect it.

What country offers a finer field for labour, and what people can evince more ardent desire to be employed?

But the very magnitude of the productive power of Ireland, has with some persons formed an objection to stimulating employment; it is supposed that if capital be applied to Ireland, the exuberance of its productions, already alarming the English agriculturist and grazier, would flow in still greater profusion into an already glutted market. This is not a legitimate inference. It is not only probable, but it is founded on experience, that an improvement in the condition of the working classes leads to an immediate consumption of superior articles of food and dress, and that although the productive powers of Ireland would be increased by the application of capital, its consumption would increase in a still greater ratio.

When a new line of road, or the construction of a pier has led to the sudden formation of a small town, it is found that the former potatoe-eater becomes a consumer of wheaten bread,—a market is formed,—meat is used,—shops arise, exciseable commodities are consumed, English manufactures supersede the former ruder articles in use, and a great extension of comforts and comparative luxuries take place.

A general improvement in the mode of living of millions of the lower Irish (and there is no reason why under a better system such improvement should not be general) must imply a much larger consumption of these "necessaries of life" which are now exported.

The very meaning of that improvement must be, the enabling the people to eat more of flour and beef, and pork and butter. It must mean the creation of a new "home market" for those articles. The only legitimate corrective of the rivalry of Irish produce in the English market, consists in the *raising the condition* of the Irish population. But, admitting the great productive powers of Ireland, and the probable extension of such powers from improved agriculture, can the wretched policy be for a moment entertained of withholding capital, under terror of rendering Ireland a more formidable competitor? Ireland is a part of the kingdom, and her improvement must be viewed as an integral portion of the general prosperity.

It has been further objected to the interposition of the Government, that it teaches the people to depend on resources in their own nature temporary, and in the end aggravating the distress. Such objections might apply to the occasional and *gratuitous* aid afforded on emergencies. But even from such cases considerable permanent good has resulted, and much independent demand for labour has been produced. The character of the Irish peasant is, however, misunderstood. He is judged from the cruel circumstances to which he has been subjected. Give him a small portion of land with any degree of permanency, and he will zealously seek to work out an independency, and, with his habits of *spade labour*,

employment and support for a family may be entailed from generation to generation. Neither can any doubt exist of the ability of Ireland to repay advances for useful works. Even under the past inefficient system, 673,000*l.* was repaid by grand juries on account of mail-coach roads, leaving due and repayable a balance of less than 20,000*l.* But even if the interposition of Government had been hitherto ineffectual or even mischievous, no reason can be thence deduced against a prudent and cautious interposition on sounder principles.

But, in fact, great good has already resulted from works carried on by Government; the great impulse given to private industry, the diffusion of those natural manures so profusely supplied in Ireland, improvement of barren land, construction of better habitations, augmentation of farming capital, promotion of peace and civilization, increase of comforts, augmentation of the revenue,—all these consequences exhibit themselves wherever extensive works have been executed by intelligent engineers. Besides, the actual existence of a large territorial revenue applicable to works in Ireland, specifically calls for the interposition of Government, to correct abuses acknowledged to exist in its administration.

If it be intended to continue the powers of grand juries, the system herein proposed may be advantageously made auxiliary to the administration of those powers, and effectual checks may be applied to the execution of works and the accounting for expenditure.

Assuming it therefore to be admitted that in the particular circumstances of Ireland the interposition of the Government be desirable to direct public labour, we may ask whether on general principles there remains any ground of objection? Where a taxation already exists for the employment of labour for public purposes, and when so pressing a necessity is admitted for extending that taxation and employment, can it be justifiable in the Government to withhold its interposition? Is it not an imperative duty that it shall look to the due and efficacious administration of so important a purpose?

In the case of Scotland, under the Commissioners of Highland Roads and Bridges, £. 450,000 was expended in the formation of 875 miles of road, opening up in the most beneficial manner the more barren tracts, and advancing materially the improvement of that country. The services of that commission were gratuitous, and the whole trust may be said to have vested in Mr. Telford, whose distinguished skill and integrity justified the confidence. But this instance would not justify a corresponding practice.

In most of the great countries in Europe, the departments of public works have formed one of the most important branches of their several Governments.

In France, successive monarchs distinguished themselves by zeal for public works. So early as in the reign of Henry the Fourth, the Canal of Briare was constructed by Government, the first canal of portage, and the model of all which have since been formed in France and England.

The Canal of Languedoc followed in the reign of Louis XIV. and the enlightened administration of Colbert promoted public works to the utmost.

It is unnecessary to advert to the vast undertakings of the Emperor Napoleon, or the degree in which they facilitate the intercourse between nation and nation, and advance the interests of commerce.

In the North of Italy, the canals for irrigation, conducted by the Government, contributed more than anything else to the improvement of those countries, and their effects are still visible. But above all, the free states of Holland and America have devoted the greatest exertions to public works. In Holland, though so covered with works that it would seem that there was no room for more, that wise people are about to advance two millions for new undertakings.

The stupendous public works in the United States have drawn together and identified the interests of the most remote regions of their vast empire.* The great rival works of the Welland and Rideau canals in our own colonies are of not less importance.

It is desirable that some safe direction be given to public opinion on this critical subject, because the compulsory principle of the Poor Laws once admitted, there can be no retractation.

In order to justify the eagerness of public expectation, and prevent the precipitate adoption of some injurious expedient, in ignorance of the actual state of Ireland, Government should deliberately arrange a plan to be submitted to Parliament. It is impossible that extended powers of taxation can be safely committed to any local authorities, without danger of still greater abuse than is attributed to the management of grand juries. If money is to be levied from land, and still more, if funds are to be advanced on securities for repayment, it is indispensable that Government should constitute some responsible and competent department with the necessary powers for so great a trust. If selected with an honest view to skill, integrity and efficiency, perhaps no office was ever created which could render more important services; the qualifications suitable to such a trust should be amply paid for; a gratuitous commission would not be efficient.

In recommending a new system, the precedent of the Highland roads and bridges suggests the principle of advances of money on the security of land. It is, however, advisable that in a permanent system, no *gratuitous* aid should be afforded; it should be an inflexible principle that all money advanced by the public should be repaid, principal and interest, from the district on which it has been expended. No doubt can exist that capital judiciously applied to improvement of land in Ireland by private persons, will produce a return of from 15 to 20 per cent. Advances of money fairly applied to the improvement

* Lake Erie Canal cost 2½ millions sterling, a railway is in progress to connect the Ohio with the Atlantic.

ment of the country would therefore afford a certain reimbursement at 10 per cent. per annum including interest.

But when we take into consideration the deficiency of employment in Ireland; the declension of the staple manufacture of linen; the general superseding of hand-weaving by machinery; the want of capital in farming; the embarrassed state of landed property in general; the impoverished condition of the agricultural tenantry; the absence of the great proprietors; the periodical recurrence of distress, which, from whatever cause derived, threatens frequently the very existence of multitudes; when we contemplate the general misery which prevails and the want of internal resources to counteract it;—all these considerations emphatically warn us that some extraordinary remedy must be resorted to.

It is recommended that a Commission should be appointed immediately, under the Treasury, in which all works constructed in the whole or in part by public money, should be vested for their preservation and maintenance; that all proposals for new works should be addressed to such commission, and when a work is of sufficient magnitude or importance, their report thereon submitted to the Treasury for its sanction; that such commission should be authorized to raise money by loan for advances for works, on security for repayment, principal and interest, from the districts improved by such works. The warrants of the commission for the levy of money assessed to repay advances, might be communicated to the judges of assize, to be added to the presentments.

All works must originate in an application from some authority representing the parties to be taxed.

As it is proposed that all assessments under authority of the commissioners should be levied by a valuation, and apportioned to the interests of the parties in their respective holdings, a question may arise whether all grand jury levies should not be made on the same principle. The recommendation that a commission should issue under the Crown for the performance of all the duties before pointed out, is not with a view to increase patronage (indeed it is possible that reduction of offices, by consolidation of duties, may be the result), but because it seems unavoidable, where public money is called for, that the Government should require the superintendence and responsibility of some public authority. It is further desirable that the parties to decide on the expediency of works should be wholly independent of the district making application.

And it is requisite that the proceedings of such a commission should be in all their main points periodically reported to Parliament.

But although the intervention of a commission is unavoidable, it is advisable to call into action all local authorities, as far as they can be made available; in all original applications a district may be represented by some recognized body of persons. In the progress of works, the commission would, of course, be open to all complaints from the public as to the manner of execution, and the accounting should be strictly submitted to some local authority, and made with due publicity. All that sort of check which is derived from the vigilant observation of persons paying taxes for the work which is going on, would advantageously attach to the proposed system. On the other hand, it is not less necessary that the instrumentality for directing execution of works should be through persons unconnected with the lands to be taxed for improvement: it is not necessary to encumber this statement with the details of an organization, which may however be very simple and efficient.

It is desirable that the utmost latitude should be afforded to applications for aid. Instead of defining any particular authority to which should be limited the right of application, it seems safer not to do so; if such a body possessed the sole right to apply, it would enjoy also the power to suppress; when a discretion vests in the commission, there is no reason why grand juries for counties, magistrates at quarter sessions, baronial magistrates and vestries, selected by some moderate qualification, should not each be empowered to propose works on the part of their districts, and in cases of severe distress the commission might be authorized to undertake works at its discretion. Where works concern private property only, by analogy with the Acts of Sewers, and the Enclosure and Drainage Acts of England, a majority of the property may be held entitled to apply and to control a minority.

The only practical difficulty connected with the proposed system, would be in the *assessment* for repayment.

The present assessment of grand jury taxation is loudly complained of as unequal and unjust. It is expedient, even without any purpose of extending this taxation, that a survey and valuation should be made as the basis of a corrected taxation. If a provision be to be made for the employment of the people out of the revenues of land, it is indispensable that such a valuation should, as early as possible, be carried into effect. That being accomplished, it is not difficult to adjust taxation on an equitable principle of distribution; that principle should be, to proportion the tax to the interest of the respective parties in the land on which it is levied.

The poor's rate of England continues to be levied on occupancy, distinguished from ownership of land; it will not be contended that such a principle could be thought of *de novo* for Ireland. The complexity of tenures produces some difficulties, but these may be surmounted. The simplest means suggested would be, to calculate by the tables the interests of the several parties—landlords, intermediate tenants, and occupiers; charging the tax by a per centage on those interests.

The survey and valuation under the Tithe Composition Act may be for the present assumed as a sufficient basis for assessment.

The assessment proposed would be an income tax on the clear rental of the district.

However unfavourable and even alarming the condition of Ireland is, no doubt can exist in the mind of any man understanding the country, that by judicious management it may be

be rescued from distress; that an impulse may be given to industry which may right the country.

Ireland is essentially an agricultural country; its peasantry produce their own food, independently of markets and even of paid labour. To the possession of a portion of land sufficient for the food of his family, add some labour, and the man considers himself prosperous.

When we observe the vast tracts of unimproved land, it is obvious that a transfer of the unemployed to those tracts would afford occupancy and employment for multitudes. When we notice the miserable system of tillage, it is evident that improved agriculture would greatly augment employment, especially amongst the young: the employment of idle hands on productive and useful works would disembarrass landlords (without hardship to the parties) of an encumbrance which must interfere with beneficial arrangements of tenancy and the progress of independent improvement.

The bogs of Ireland, by aid of the natural manures,* give most vegetable products in perfection. Vast tracts of alluvial soil can be reclaimed from the sea and from lakes and rivers. In several districts extensive drainages may be profitably conducted; the innumerable natural harbours of the coast require only some moderate works of art to render them available for fisheries and commerce.

The fisheries in themselves, if duly encouraged, would afford an immense resource of the most valuable labour; so likewise a coasting trade, facilitated by the construction of landing places.

No nation in the world, with equal facility, is so deficient in maritime habits and tendencies as the Irish; the greater part of their coasting trade has been principally carried on by Scotch and Welch vessels. It is of great consequence to inspire into the Irish and encourage propensities to a seafaring life; above 1,600 miles of coast afford an extensive range for industry in all matters connected with the sea; it also affords inexhaustible manures, suitable to the improvement of the interior districts.

The differences between the proposed plan and any system of Poor Laws on the English model are these:

1st. No compulsory right is created, entitling a party to demand labour or support, taking away all grace and favour from the relief, and suggesting every possible fraud and imposition in the assertion of the right.

2dly. The employment of paupers would not be, as in England, circumscribed to parish or other local boundaries, rendering it improbable that works can be of sufficient extent to be generally productive or remunerative.

3dly. The authorities called upon to direct employment would not be broken into so many fractional parts as to baffle all superintendence of their proceedings, to favour local jobbing and preclude effectual responsibility.

4thly. The public labour could not be perverted to private purposes as in England, giving the farmer a corrupt interest in the extension and abuse of the rates.

5thly. By proportioning the reward to the labour, it would stimulate industry, instead of relaxing all its energy, as is the case in the poor's labour of England.

6thly. By assuming more of the character of independent employment arising from the voluntary offers of the workmen, it would counteract the degrading impression of compulsory pauper labour.

The permanent evil of absenteeism has some qualifications derived from the character of individual proprietors. Several amongst them are distinguished by the most liberal and even munificent acts of encouragement, and by allowances to tenants and moderation of rents. These exceptions do not suffice to remedy the general calamity of the absence of proprietors.

However, in the application of the system recommended, it is probable that it would fall most lightly on those who have been the best and most improving landlords, because on the estates of such proprietors there must exist less necessity of interposition.

It would effect an absentee tax without invidious exclusiveness; it would also, through its entire operation carry with it the remunerating corrective of applying the taxation to the rapid and effectual improvement of the property taxed.

It would guard against the misapplication of means to either public or private works of magnitude, arising from ignorance or the want of practical knowledge on the part of individuals well disposed to promote improvements.

It might be so regulated as to give a preference without loss to human labour over that of machinery. It might have the effect of applying unbounded capital to substantial improvement, under the direction of consummate skill.

It would attain the greatest result of good with the least practicable abuse of the means.

It is not intended (as was before remarked) to give the detail of a department such as proposed. Much would depend on the extent of the duties actually to be exercised. At the outset three commissioners and a secretary would probably suffice.

The expense, however, would be no burthen on the finances of the country; it would be much more than covered by the difference between the rate of interest at which money could be raised and that at which it could be lent for works in Ireland, even at the lowest expenditure which can be contemplated.

N.B.—It is not intended that the capital required for employment of the people should be obtained through an increase of public debt, nor by advances from the Consolidated Fund, but that loans should be raised on the security of the assessments of the commissioners.

June 1829. *M. FitzGerald.*

* Lime and all its compounds.

APPENDIX, No. 4.

SYSTEM of RECLAIMING BOG and MOORY MOUNTAIN PASTURE, as practised on the Crown Lands of *Pobble O'Keeffe*, County of *Cork*, by *Richard Griffith*, C. E., 1835.

THE bog and moor lands of this district may be divided into three classes; viz.

1st. Flow moss or bog, varying from five to twenty feet in depth; the surface is composed of bog moss (sphagnum) in vegetation, and a few tufts of heath; the subsoil is gravelly clay.

2dly. Close-grained mountain bog, surface covered with coarse grass, and some moss (sphagnum) in vegetation; the depth of bog varies from two to ten feet.

3dly. Shallow mountain bog or moss; depth of bog from six inches to three feet, subsoil, clay or clayey gravel; the surface frequently uneven and tufty; the vegetation consists of coarse grass, heath and rushes. The system followed in reclaiming these several varieties of bog will differ in the detail according to circumstances; but the following may be taken as the average process.

1st. *Flow moss*; this is by much the most expensive, and, in proportion to the outlay, the least remunerative subject for reclamation; and in mountain districts, where the second and third classes are most abundant, its reclamation should not be attempted, unless under very peculiar circumstances; but its surface may be drained, with a view to the improvement of the quality of the turf or peat for fuel; and if young cattle are allowed to run on it in summer, the surface will soon be found to yield a crop of coarse grass, mixed with heath.

For the reasons stated in my report on the Crown land improvements of Pobble O'Keeffe, and printed by order of the House of Commons, the 26th March 1834, the reclamation of about 20 acres, English statute measure, of the worst variety of flow bog, varying from six to 14 feet in depth, has been attempted; and, in proportion to the progress made, the success has been fully as great as could have been anticipated.

The bog was, in the first instance, surrounded by a drain to cut off the water from the adjoining hills, and also from that part which it was not intended to reclaim; drains were then cut through the bog, both lengthways and across, so as to divide it into squares, each containing four statute acres. Owing to the extreme wetness and *pulpiness* of the bog, these drains could not be opened at once, but required considerable caution and attention in the progress; an opening four feet wide and three feet deep would nearly close up in 24 hours; consequently the commencement was made by a narrow and shallow drain, which was gradually widened and deepened, and upwards of a year had elapsed before the principal drains, in *a considerable portion of the bog*, were in a sufficiently forward state to admit of the commencement of the small drains, intended to dry the surface.

The large drains, when completed, were six feet broad at top, two feet at bottom, and four feet deep.

The second class, or surface drains, were next cut parallel to each other, at the distance of eight yards. The upper part of each of these drains consisted of an excavation two feet broad and two feet deep, in taking out the stuff, care being taken to cut the sods with a broad spade or draining tool, so as not to break them; the sods were laid on the surface of the bog, to consolidate. Subsequently when the sides of the drains became more compact, by exposure to the air, a second drain, four inches broad and 12 inches deep, was cut in the centre of the bottom of the two feet drain; thus leaving a shoulder on either side 10 inches in breadth; afterwards, where the sides of the lower drains had consolidated, and exhibited no tendency to collapse, the surface sods, cut in the first instance, were placed with their upper surface downwards on top of the four-inch drains, and were supported, in that position, by the trenches or shoulders on either side; the remainder of the bog soil excavated from the drain was then thrown on top of the sods, till the excavation was filled up; and thus a covered drain or sewer was formed at the depth of three feet below the surface of the bog.

To facilitate the discharge of the water from the under drains, one open drain was cut through the centre of each of the four-acre fields, to receive the water and discharge it into the principal or surrounding drains.

Six months after the completion of the drains, the surface of the bog was dug up and left in a rough state, exposed to the air during the winter, and in the following spring it was chopped or cut by the spade into small pieces, so as to render it as fine as possible; the surface was then covered with clay to the depth of *nearly four inches*; the clay was drawn for a distance of about 600 yards by means of a movable wrought-iron rail-road,* and

* The moveable rail-road is formed of wrought-iron bars, usually about 12 feet long, two inches broad, and half an inch thick. These bars are supported on planks made from young Scotch fir, or larch trees. They are prepared by sawing off the outside slabs, on two opposite sides, and then running a cut through the centre. The planks thus formed are four inches broad at top, six inches at bottom, and half an inch thick, the length being usually 12 feet.

On each of these planks an iron bar is fixed *on edge*, by means of two cast-iron chairs, or stands, spiked to its upper side, at the distance of one foot six inches from either extremity; one end of the bar

afterwards the surface was covered with lime, in the proportion of 37 barrels, each containing 42 gallons to an acre.

On the surface thus prepared potatoes were planted, and a moderately good crop was produced.

Following the cropping of one portion of the bog, the tillable surface of which, owing to building and plantations, from four acres has been reduced to 2 A. 3 R. 13 P. The second year a portion containing 2 A. 0 R. 34 P. was again planted with potatoes, and the remainder, containing 2 R. 19 P., with turnips; the potatoe land being manured with 20 barrels of lime to the acre in compost mixed with clay, and the turnip land partly with lime, partly with peat ashes, and partly with stable dung. Owing to the unusual coldness and wetness of the season, the potatoe crop was inferior to what was anticipated; but the turnips were excellent; at present the potatoe land has been laid down and sown with oats, York meadow-grass and white clover, and at this moment, in the beginning of July, the appearance of the crop is very favourable, and it is probable will be as productive as can be expected from reclaimed bog, which usually yields abundance of *straw*, but a small weight of corn as compared to sound upland. A crop of mangel wurzel has been sown on the turnip land of last year; it also looks well; but this portion of the bog, together with other reclaimed fields now under crops of potatoes and turnips, has been dunged from the cow-house and stable; in the former four cows were stall-fed, during the last winter, on the turnips and a portion of the very small potatoes.

In calculating the amount of the expenditure, in all departments of reclamation and cultivation, from the commencement to the present time, the outlay and return per acre is as follows:—

FLOW BOG, No. 1.

	£.	s.	d.
Reclamation.			
Fencing with double ditches, per acre	–	12	–
Draining *	1	17	–
Digging up and chopping the surface, &c.	1	10	–
Covering with clay, by means of a moveable rail-road, to the depth of nearly four inches	5	10	10
Total cost of reclamation £.	9	9	10
Manure.			
Lime, 37 barrels, each 42 gallons, at 1 *s.* 6 *d.* per barrel	2	15	6
Cultivation.			
First year, cost of seed potatoes, planting and digging per acre	4	12	4
Second year ditto	4	2	4
Additional lime, 20 barrels	1	10	–
Third year, seed oats, tilling, sowing, reaping and threshing	1	18	6
Hay seed and clover	–	16	–
Fourth year, mow and sow hay	–	8	–
£.	25	12	6
Produce or Return.			
First year, value of potatoe crop, 816 stone, at 2½ *d.* per stone	8	9	2
Second year †	8	5	6
Third year, expected produce of oat crop, 105 stone, at 9 *d.* per stone £. 3 s. 8 d. 9			
Value of straw 1 – –			
	4	8	9
Fourth year, expected value of hay crop, two tons York meadow-grass and clover hay, each 1 *l.* 10 *s.* per ton	3	–	–
Total produce of one acre for four years	24	3	5
Total expenditure	25	12	6
Portion of outlay not returned at the end of four years, at which time the reclaimed bog laid down in pasture would be worth about 10 *s.* per acre £.	1	9	1

bar being fixed into one chair, and the other, passing through the second chair, projects three feet beyond it, when a second plank and rail is placed in continuation of the length beyond the first; the projecting end of the first bar is fixed into the first chair of the second plank, and by this means the joining of the rail is always placed one foot six inches beyond the termination of the planks, and thus a firm joint is obtained.

In laying down this movable rail-road, two parallel lines of planks, with rails attached, are laid on the bog, and the proper distance between each is preserved by the insertion of an half-inch square wrought-iron bar crooked or bent at both extremities, into staples attached by spikes to the under surface of each plank.

For the further strength and security of the joining of the planks, *thimbles* made of sheet iron, of a triangular form, are attached to one end of each plank, and the end of the next having been cut into the same shape, is inserted into the sheet-iron thimble. The cost of a movable rail-road of the above description is 3 *s.* 3 *d.* per yard, including both sides, and when laid level a man can with ease push on a waggon containing 18 cwt.

* The usual cost of draining is about 1 *l.* 4 *s.* per acre, but in very wet spongy bogs the extra labour of opening the drains four and five times adds considerably to the cost.

† The second crop of potatoes is usually much better than the first, but owing to the wetness of the season of the year 1834, in the west of Ireland, the produce of potatoes in the mountains was much below an average crop.

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OF THE SECOND CLASS OF BOG.

This variety is naturally very superior to the first; its texture is close and compact, and when burnt it yields a considerable portion of red or yellowish red ashes, while the residuum from burnt flow bog, consists of a very small quantity of white ashes of no agricultural value. In reclaiming compact bog, a coat of two inches and a half of clay will be sufficient, while flow bog requires at least a depth of four inches.

The general system pursued in reclaiming compact bog is similar to that adopted for flow bog, but the draining is not so expensive, and the digging and chopping the surface is more easily effected.

EXPENSE of reclaiming an Average Statute Acre of compact BOG.

	£.	s.	d.
Fencing in six acre fields, with double ditches, top sown with furze seed -	–	12	–
Draining - - - - - - - - - - - - - -	1	2	–
Levelling and digging surface - - - - - - - - -	1	8	–
Covering surface with clayey gravel two inches in depth, the clay being raised frem the surrounding fences, and from the bottom of the drains -	2	9	–
Making compact heaps with alternate layers of surface sods and lime, including turning and spreading, &c. - - - - - - - - -	–	12	–
TOTAL Cost of reclaiming and fencing per acre - - -	6	3	–
MANURE.			
37 barrels of lime, at 1 *s.* 6 *d.* per barrel - - - - - - - -	2	15	6
Amount of expenditure for four years; cultivation same as flow-bog or Class, No. 1. - - - - - - - - - - - - - -	13	7	2
TOTAL Expenditure on reclamation and four years' cultivation -	22	5	8
The produce of each crop raised on reclaimed compact bog will be superior, both in quantity and quality, to that raised from flow bog; but supposing the return of each crop to be the same as that from flow bog, as given above, the amount of the return on four years' crops, two of potatoes, one of oats, one of hay, will be - - - - - - - - - -	24	3	5
There will therefore be a profit of - - - - - - - - per acre in four years' cultivation, at which time the land laid down in grass will be worth about 12 *s.* 6 *d.* per acre.	1	17	9

OF THE THIRD CLASS OF BOG.

This class is described as compact bog, of variable depth, and which in its natural state yields coarse mountain pasture for cattle during the summer months; the least expensive and most profitable mode of treating this variety of bog, will be to improve the quality of the herbage, and render it capable of producing good meadow and pasture.

This can be effected by fencing, draining and liming the surface, at the following rate per statute acre.

	£.	s.	d.
Cost of fencing in six acre fields - - - - - - - - - -	–	12	–
Draining as in the flow bog, but with less, owing to the solidity of the bog	1	4	–
Covering the surface with lime, 37 barrels to the acre, at the rate of 1 *s.* 6 *d.* per barrel - - - - - - - - - - - - - - -	2	15	6
TOTAL Cost of reclaiming an acre of coarse mountain pasture, so as to render it worth 10 *s.* per acre for meadow and pasture - £.	4	11	6

The foregoing details have been extracted from the accounts of the actual expenditure on the different departments of reclamation and cultivation, at the Crown farm of Pobble O'Keeffe; but it is to be observed, that the works are conducted with great system and regularity, and with strict attention to economy, and unless similar methods be taken in other places, the same results will not be obtained; but it is likewise to be observed, that the cost of lime at the Crown lands is considerable, and it is only in the summer months it can be obtained at so cheap a rate as 1 *s.* 6 *d.* per barrel: in favourable situations it may be obtained at 1 *s.* per barrel, and even less. Were this the case, the third class of bog could be fenced, drained and manured at the rate of 3 *l.* 13 *s.* instead of 4 *l.* 11 *s.* 6 *d.* per statute acre.

King William's Town, Pobble O'Keeffe, July 7, 1835. (signed) *Richard Griffith.*

Appendix, No. 5.

OBSERVATIONS on a direct STEAM NAVIGATION with *St. John's* in *Newfoundland*, by Mr. *William Bald.*

IF London be taken as the point of departure for the nearest land in America, and that shortness is the object, then the line is to go direct to Bristol or to Milford Haven, then across the channel to Waterford, and thence to the harbours of either Bantry Bay, Bear Haven, Kenmare River or Valentia. The harbours of Bantry Bay and Bear Haven are the most southerly situated on the western coast of Ireland, and they are safe, capacious and fit to receive and hold in safety ships of any size; Bearhaven harbour, in the language of that able nautical hydrographer, Murdoch Makenzie, is, "An extraordinary good harbour, and there are two entries to it."

Although this line of communication may be a most desirable one, as it would go direct from the capital of the empire, yet there are on the other hand many great and vital objects it would not at all embrace; for example, Liverpool and its extensive important commercial interests, along with the great manufacturing districts immediately behind it, combined with Glasgow and the towns of the Clyde and Forth; and these are such, that in opening a communication with the States of America, that could not be left out, or be made a secondary consideration. Therefore, attentively considering the position of Liverpool upon a map of the empire, it appears to be the very centre or point which should be chosen or adopted to embrace England and Scotland; and a straight line on an arc of the sphere drawn from Liverpool to St. John's in Newfoundland would pass through the very centre of Ireland and might go through Dublin.* But running across Ireland in this direction, three separate and distinct lines present themselves: the shortest one is to Galway Bay, the next to Clew Bay or Blacksod, and the third to Limerick, and then out by the Shannon to the Atlantic. Murdoch Makenzie says, that "the Shannon is a river of easy access, where fleets of the largest ships may ride in safety in all weathers."

The railway going through the middle of Ireland would give an equal conveniency, both to the districts of the north of Ireland as well as to those of the south; indeed the whole of the three kingdoms would be more fairly embraced by taking Liverpool as a point of departure, than by any other line which has yet been proposed or laid before the public.

The rising prosperity of Liverpool, its geographic position on the edge of the Western Sea, facing all the States of America, also its connexion with the greatest manufacturing districts of England and Scotland, and its immense commercial connexion with all the countries in the world, point it out as the very best place for departure going to America; and the railway now making from Liverpool to London will join the capital of Britain with this line of communication, connecting the states of the new continent with the old.

Distance from the Western Headlands of Ireland to St. John's in Newfoundland.

THE result of the geodesical and astronomical observations of the French men of science, assign to the circumference of the elliptic meridian 24855.84 miles; and the investigations on this interesting subject by the late Professor Playfair is 24856.72 miles to the circumference of the eliptic meridian. The circumference of the equator is 24896.16 miles, and the radius of curvature for the parallel of latitude 45° is 3956.009 miles.

The recent calculations of Professor Airy seem to indicate, that the earth is protuberant at the latitude of 45° above the ellipsoid which has the same axis.

I am ignorant of the progress, since 1830, of the very interesting geodesical operation which was then carrying forward on the continent, upon the parallel of latitude 45°, commencing at the Tour de Corduane, situated at the mouth of the Garonne and running eastwards; this operation was commenced by the Government of France at the suggestion or request of Laplace, for the purpose of obtaining additional data to investigate the figure of the earth. I am in possession of the account of this operation through the south of France, with the chain of triangles and calculations which were given me by M. Nicollet, Assistant Astronomer in the Royal Observatory at Paris, and who was engaged in this operation.

But the figure of the earth is not yet sufficiently determined so as to offer any thing but an approximate result, and the distance or length of the arc between St. John's in Newfoundland and the most seaward headlands on the west coast of Ireland, may be taken at a subtense of 26°.834 on the circle of the equator; then there will be the following very simple results, which will in general be better understood perhaps than if they were expressed in other form or terms:

$$\frac{24896.16}{360} = 69.156 \text{ English miles to a degree on the equator.}$$

26.834

* An abundance of excellent granite can be had at Dublin and also in the county of Galway, on the Atlantic side, and immense quantities of dark and gray limestone are found through the centre and interior of the country between the Bays of Galway and Dublin.

$26.834 \times 69.156 = 1855.73$ English miles from the most seaward land in Mayo to St. John's in Newfoundland.

$24896.16 \times 26.834 = 668062.55744$; $\frac{668062.55744}{360} = 1855.73$ English miles.

Or $26.834 \times 60 = 1610.04$ Geographic miles from the most seaward part of the coast of Erris, at the harbours of Blacksod and Broadhaven in the county of Mayo, to St. John's in Newfoundland.

William Bald.

The figure of the Earth is stated by Newton at $\frac{1}{230}$; by Laplace at $\frac{1}{305}$; Playfair deduced it from numerous authorities at $\frac{1}{312 \cdot 5}$.

Maclaurin in 1740 was the first to give a complete investigation of the attraction of a homogeneous ellipsoid of revolution upon any point situated upon or within its surface; his demonstration is according to the ancient geometrical method, and is considered as one of the most beautiful specimens of that kind given in modern times. One of the first mathematicians of France paid him the following compliment:

> "Pour suivre celle que M. Maclaurin vient de donner dans son excellent Traité des Fluxions, cette methode m'a paru si belle et si savante que j'ai cru faire plaisir à mes lecteurs de la mettre ici."—*Clairaut.*

Appendix, No. 6.

OBSERVATIONS on the Reclamation of Waste Lands in *Ireland*;

From G. Poulett Scrope, Esq., M. P.

I ventured to offer to the Committee, in an early stage of their investigation, a suggestion, having in view the appropriation by Government of a limited portion of such tracts of Waste Land as shall be materially improved in value by the opening of roads through them by an expenditure of public money. Further consideration, and a review of the Evidence taken before the Committee, have led me to believe that the principle involved in that proposition ought to be carried out more extensively and generally, and I beg, therefore, to be permitted to offer to the Committee the following considerations, and the suggestion founded upon them.

The Waste Land of any country (meaning by that term the surface in its raw state, as it comes from the hand of Nature) is, I conceive, upon the soundest principles of natural right, *the property of the people collectively* (that is, of the State), given to them by the Creator for their sustenance, and should be dealt with by the State for the greatest advantage of the people.

I conceive that no State can be justified in conferring upon or continuing to any individuals an exclusive property in extensive tracts of Waste Lands, which they are neither willing nor able to reclaim or cultivate, whilst there are other individual members of the community in a state of destitution from the want of employment, who might maintain themselves upon such lands, if permitted to reclaim and cultivate them upon their own account.

I conceive that, even could such an appropriation be supposed to have received the assent of the entire people at the time when it took place, such property could only be considered as temporary and conditional on the circumstances of the people not requiring that it should be resumed by the State for their benefit; for that no former generation can be conceived to have had the power of locking up, or of authorizing individuals to lock up, for ever in an unproductive state, tracts of their country's surface, whose cultivation, though not required for the purpose at the time, might thereafter become necessary for the sustenance of an increasing population.

The principle that the property of the soil of a country is originally vested in the State, or its sovereign power, in trust for the people; that the people have a right to reclaim it from a state of waste, and cultivate it when necessary for their subsistence; and that such reclamation forms the only equitable title to a *permanent* property in land, may be found running through the law and customs of every

nation on the earth, including even the least civilized. Throughout the East, (subject to the claim of the sovereign to a proportion of the produce) "the property of cultivated land has always lodged in him who cut away the wood, cleared and tilled it, and in his heirs." These are the words of the Hindoo Institutes of Menu, a work of immense antiquity. The law of the Scandinavian nations, who occupy the North of Europe, has always required those chiefs or nobles in whom it vested a property in large tracts of land, cultivated or uncultivated, to provide a maintenance for the inhabitants of their estates; which was in effect to make the tenure of their property conditional on its being so employed as to afford a maintenance to the people born upon it. Throughout the countries over which the feudal system extended, the same principle was practically admitted; the lords and seigneurs, by universal custom, conceding a more or less durable right of occupation (by copy of Court Roll or other form) to such inhabitants as undertook to reclaim and cultivate portions of the waste land or "common" of the manor; while the Courts, acting upon the same principle, have seized every opportunity of converting the tenures so founded upon reclamation and improvement into a permanent prescriptive title. The colonists of the New World have generally proceeded on the same principle, the State affixing to its grants of waste land to individuals conditions more or less stringent, for the purpose of securing its gradual improvement and cultivation, and reserving a right to resume it, if suffered to remain beyond a certain term in a state of waste.

It is not, however, proposed, that in the case of Ireland the State should exercise what upon the abovementioned grounds may be considered to be its strict right, namely, of resuming, *without compensation* to their legal owners, such tracts of waste land as are at present retained in an unproductive state, contrary to the interests and natural rights of the community; but merely that the same principle of legislation which enters into every Act of Parliament for making a turnpike-road, rail-road or canal across the country, should be applied to the case of waste lands; and that a sufficient case being made out of prospective benefit to the public, they be appropriated by the State for the use of the people; compensation being made to their legal owners to the full of their present value, by the verdict of a jury.

I cannot conceive with what justice the proprietors of such lands can complain of their property being taken from them under such circumstances, whilst I think it self-evident that the people of Ireland will have just cause to complain of the Legislature, should it refuse their paramount claim to be permitted to maintain themselves upon such portions of the surface of their native country as are fitted by nature to afford them sustenance, in return for their labour exerted upon it, and of the law which should continue to permit individuals to lock up such tracts in a state of unproductive barrenness, while numbers of the population are starving for want of employment and food.

I would propose, therefore, that an Act should be passed authorizing the appointment by Government of a "Waste Land Commission" for Ireland, to be empowered to effect a survey and valuation of such large tracts of waste land (whether bog or mountain) as they may think it desirable to reclaim, (which has been already in great part done to their hands by the late Bog Commissioners), and to undertake the primary steps necessary for the reclamation of these tracts, such as the opening of main drains, roads, &c. The present owners of such lands to be compensated to the full of their present value, either by an allotment of the land reclaimed, or in a money rent-charge on the whole of the reclaimed lands at their option, the valuation or allotment to be finally adjudicated by a jury; and where there exist any doubts as to the proprietorship, the property of the allotment or rent-charge to be vested in trustees for the benefit of the several claimants. The Commissioners to proceed to divide the lands into lots of not less than five, nor more than 100 acres, of which they shall offer in the open market perpetuity leases, to such persons as shall be willing to undertake their further reclamation and cultivation, engaging to fence them, and erect a house and proper farm buildings on each, and to pay an annual quit-rent, which shall be sufficient, at the least to cover the interest of the sums expended by the commission, to pay the landowner's rent-charge, if any, and to maintain for ever the roads, main drains, and other necessary works of public benefit upon the land; the surplus to be applied towards the rates levied in the barony or county for similar public works.

I believe that the result of such a measure would be of incalculable benefit to Ireland. It is known that near Five Millions of acres of its cultivable land is

now

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now locked up in a state of waste. Were this by degrees brought into the market upon the above-mentioned terms, the lots would, I imagine, be eagerly taken by those of the peasantry and middle classes who are possessed of a little capital, which they now have no means of employing *safely* and productively; the excessive competition for land at present placing tenants at the mercy of their landlords, who after squeezing out their little capital from them, may and very frequently do, oust them to put in another competitor, who is treated in turn in the same manner. Where capital was wanting, it would be supplied rapidly either from the economy which would be called forth by the opportunity thus held out of obtaining that most generally desired of all objects of human longings, *a farm of one's own;* or it would be supplied by loan from loan funds, or by individual capitalists in the towns, or from England, upon the security of the lease.

The double object would thus be obtained of profitable employment for both the capital which is now lying idle, or at very low interest throughout the country, and the labourers, of whom such numbers are in a state of extreme and almost constant suffering, entailing a heavy burden upon the industry of the country through their want of work. Those who know with what extraordinary ardour and energy an Irish peasant will labour when working on *his own account*, in the improvement of land, in which he possesses a durable or permanent interest, what extreme economy and industry is every where exhibited by him under such circumstances, will appreciate the extent to which these qualities and their valuable results must be developed, by a measure which will place in this most desirable position a body of very many thousand persons, who are now leading a life of constrained idleness and poverty, probably accompanied by their usual followers, discontent, insubordination and crime. The entire class of tenantry throughout Ireland must share in the advantages derivable from an enlargement of the field of agricultural industry, and a diminution of the excessive and cruel competition which now prevails for even the insecure and temporary occupation, on the most extortionate terms, of any acre of cultivable soil that may be in the market.

The effect of such a change on the state of society in Ireland, as determined by the relations between landlord and tenant, would be rapid and incalculably beneficial, and coupled with a liberal expenditure of public money in such works as the Navigation of the Shannon, &c. and the extension of the powers of the Board of Public Works, as well as the other measures recommended by the Committee, would greatly facilitate the working of such a system of Poor Laws as the almost universal voice of the country is now demanding and will undoubtedly carry; a system which cannot stop short of the principle of securing a maintenance to every well-conducted member of the community.

I need scarcely allude to the benefit, moral and political, which would result to Ireland and Irish society, from the creation of a numerous class of small landowners, or independent yeomen, such as the proposed measure tends speedily to raise up. In Ireland the number of landed proprietors is smaller than in any other country in the world. In France, more than 20 millions, or near two-thirds of the entire population, belong to the class of landed proprietors; in Norway and Sweden about one-third; while in Ireland, with a population of eight millions, there are considered to be under 10,000 landowners, and a considerable number of these are neither natives of, nor resident in, the country. The absolute prostration to which the law of Ireland condemns the cultivators of its soil beneath the irresponsible and unconditional power of its proprietors, I believe to be at the bottom of all the misery, turbulence and disorganization which desolate that unhappy country, and a far more influential cause, in my opinion, of its distracted state, than even its division into rival religious sects; a division, the evils of which are much more closely connected with circumstances of land occupation and ownership than is generally supposed or openly acknowledged. Concede the just claims of the mass of the people to maintain themselves by the cultivation of the fertile soil of their country on equitable and reasonable terms, and their religious differences will be no more likely to create political or social dissension among them, than is to be found between the Protestant and Catholic fellow-subjects of Prussia, Belgium, Austria, and other States of the Continent.

Appendix, No. 7.

SKETCH of a System of Poor Colonies, for Employment of Labourers and Reclamation of Waste Lands in *Ireland*.

By *Winston Barron*, Esq. M. P.

IT is suggested that a plan similar to that pursued in Holland and Belgium, for maintaining and employing the destitute poor, might be adopted in Ireland, with great advantage to that country, and also to England. I am aware that the original plan adopted in those countries did not succeed to the full extent it was expected, and hence some prejudice has arisen against "Poor Colonies." The original plan was, to allot to the poor certain small farms, about seven acres British to five individuals: to advance capital for building a house, and the outlay of the first year; then to levy a certain portion of the produce yearly, increasing according as the ground became reclaimed, until all capital and first cost of the Waste Land was repaid to the benevolent society who undertook the management of the funds collected. It was soon found that improvidence and bad management retarded improvement, notwithstanding the strictest surveillance, and the original plan was therefore altered. This altered plan has completely succeeded.

The following is a mere outline of the improved and successful plan:—

The colonies contain each about 1,000 persons*. There is an intelligent educated person, perfectly conversant with farming and the management of landed property in all its details, placed as a steward or manager over each colony, with one or two assistants, according to circumstances. These are the only paid persons on the establishment, except the paupers.

The establishment is conducted very much on the system of a military establishment, with regular grades of rank and pay, according to good conduct and intelligence. The poorest ground is always bought for the colony, and is reclaimed by the colonists as paid labourers, in gangs, and a great deal performed by task-work; the latter is preferred. All capital, houses, stock, &c. are the property of the society.

Good conduct is rewarded by promotion and distinctions of various kinds. Bad conduct is punished by various privations, and if persevered in, by expulsion.

A regular account is kept of all expenses, and books balanced every month.

There is a head committee that controls all accounts, and gives orders for all money required.

I would propose that this plan should be tried merely as an experiment at first by one colony of 1,000 persons in each of the four Provinces of Ireland. I calculate from my own knowledge and from minute inquiry into the value of waste land that is reclaimable, also from the price of labour in Ireland, that this experiment might be tried for 50,000*l.*

I would propose that about 2,000 acres of waste land should be bought for each colony, under the control of the Board of Works, by a county charitable board, to be elected by the same persons that elect Members of Parliament; that one-fourth of this board should go out every year, but to be eligible to be re-elected. All accounts to be controlled by the Board of Works in Ireland. An inspector should be sent twice a year by the Board of Works to visit each colony.

The capital for the purchase of land, for buildings, cattle, farming implements, &c. &c. to be advanced by the Board of Works, under the order of the county board made at a general meeting, held by public notice.

The local board should have the power of appointing an acting committee to superintend the establishment.

That the clergy of the district, of every denomination, as also the magistrates, be, *ex officio*, members of said local committee.

That the money should be advanced at the rate of three per cent. interest.

That either two, three or more counties may join in any one of these colonies; each county appointing an equal number of persons to the county as a local board.

The

* Some of the Dutch Colonies contain upwards of 2,000 persons.

The local board to appoint the head manager, or bailiff, of each colony, he being an experienced agriculturist.

The local committee to appoint and promote all the inferior officers.

The reclamation of the land to be the chief object of the colonists.

Manual labour and task-work to be as much as possible adhered to, but not exclusively.

A school, for both children and adults, to be kept in every colony.

That in each school, agriculture, or practical farming, should form a prominent branch of instruction.

That each person in the colony should attend his own place of worship every Sunday, and oftener, if he should so wish.

That a system of rewards and punishments, and promotion or degradation, should be laid down by the local board, for the committee to act on.

The admission of paupers to the colony to be regulated by the local board.

Repayment of Money.

That for the first seven years only the interest of the money advanced should be repaid by the counties to which it is advanced. This would be for one colony of 1,000 persons =

The Expenditure to be paid by Counties per annum for the first seven years.

Interest - - -	£. 375
Head Manager - -	100
Schoolmaster - -	40
Deputy Manager -	50
One Assistant ditto -	30
	£. 595

The above 595 *l.* per annum to be raised by presentment off each county, or its proportion off each county, if two or more counties join in the colony.

After seven years, the colony, having the land reclaimed, should be equal to pay the interest and expenses itself, as was done in Holland on much inferior land to that to be found waste in Ireland.

After the first ten years, a sinking fund should be established to pay off the principal advanced by the Board of Works; and supposing the reclaimed land should then be worth only ten shillings an acre, the whole of the principal, interest and expenses would be paid in about twenty years from that time, and the county would have an estate, for charitable purposes, of 2,000 acres of land reclaimed, and in a high state of improvement. The county would also have the great advantage of the example of a well-cultivated farm, and the method best adapted for reclaiming wastes with profit. Besides all this, a thousand of the poorest persons in the district would be relieved, and they themselves reclaimed from idleness, bad habits and wretchedness, to industry, comfort and usefulness.

The cost of doing all this would not amount to 12 *s.* per head per annum; and even that cost would continue but for seven years; whilst, in the end, an estate would be realized for charitable purposes of the value of 1,000 *l.* per annum, at the low rental of ten shillings per acre.

The board to have power to lease small farms, suited to spade husbandry only, to the most deserving of the colonists, after seven years' experience of their integrity and industry, at a moderate rent and under strict covenants, as yearly tenants; this to be a reward of good conduct.

Rate of labour to be settled by local committees, subject to the approval of the board.

All the colonists to be lodged and fed in the establishment.

An Act of Parliament should be procured, and a clause inserted in it, to empower landlords to sell waste lands to the county boards for the above purposes: Colonists allowed to purchase the fee of land, at 21 years' purchase on the amount of their rent.

A Savings Bank to be established in each colony.

The several details of rewards, of punishments, of hours of labour, of internal police, of diet, of control, &c. &c. are not here given.

Many will be frightened at this plan, because a tax is to be levied, however light, for the employment of the poor. It is also proposed to levy half this tax off the occupying tenant, and half off the landlord holding the beneficial interest in the land, after a plan to be hereafter proposed. Those who are alarmed at this plan should recollect, that all the power is given by it to those who pay the tax, and little or no abuse can therefore arise from it; and 2dly, no pauper is to have

any power to demand entrance into the colony as a matter of right; he is to be elected as a favour, on account of his good conduct; and 3dly, no man, woman or child is to remain in the colony without contributing by his labour to his own support, and conforming to the strict discipline of the establishment, and also conducting himself with decency and propriety in language and conduct.

The expense for one county, of one such establishment as this, of 1,000 colonists, if said county contained 300,000 acres of land, would not amount to one half-penny per acre yearly for seven years. It is thought that this very paltry sum could not be objected to by the most timid or hard-hearted, for such an object, and particularly under such control, and a complete system of checks.

No I.

Map of the BRITISH EMPIRE

Exhibiting the most level, the shortest and least expensive

Line of Railroad,

ACROSS IRELAND FROM DUBLIN TO GALWAY BAY,

with Lines to CLEW BAY *and* BROAD HAVEN *in Mayo,*
shewing also the direct line across Ireland, taken from

LIVERPOOL TO St JOHNS IN AMERICA

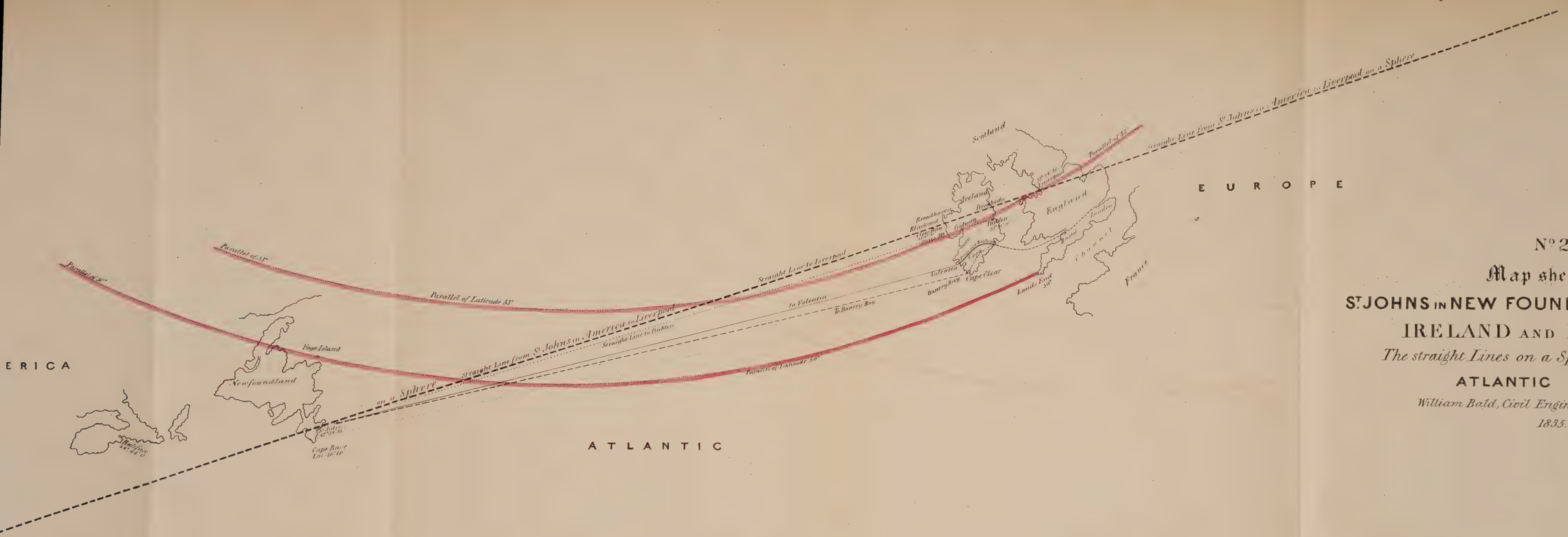
on an Arc of the Sphere.

By William Bald, Civil Engineer, F.R.S.E. M.R.I.A. &c.
1835.

The Line from London to Bristol, Waterford & Cork, connecting the Harbours of Bantry Bay and Kenmare River claims particular attention in forming a communication with America and London direct. If from Liverpool then to Dublin and Galway Bay.

William Bald, London, June 1835.

Ordered by the House of Commons to be printed, 27 August, 1835.
James & Luke G. Hansard & Sons, Printers.
Standidge & Lens



Suppose a Ship is going from the Lands End in England directly across the Atlantic on an Arc of the Sphere to Cape Race in New Foundland, Lat. 46°40' she will reach, in crossing the Atlantic on this Line Lat. 50°45'; which will be 45 Geographic miles to the north of the Lands end; to prove this it is only necessary to examine this Map, and see how the straight line between the Lands end and Cape Race cuts the Parallel of Lat. 50°

A straight Line drawn on the Sphere from Liverpool to St Johns in America, will cut through Clew Bay, in the County of Mayo, Lat. 53°47'.30" nearly; this question having been misunderstood, this Map taken from the Sphere will be found to shew the true positions, & to afford the required explanation.

William Bald, London, June, 1835.

No 2.

Map shewing

St JOHNS IN NEW FOUNDLAND IN AMERICA, IRELAND AND ENGLAND,

The straight Lines on a Sphere across the

ATLANTIC OCEAN.

William Bald, Civil Engineer, F.R.S.E. &c.

1835.

Ordered by the House of Commons to be printed 27 August 1835

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REPORT

FROM THE

SELECT COMMITTEE

APPOINTED

TO INQUIRE INTO THE PRESENT STATE

OF THE

HARBOURS OF LEITH AND NEWHAVEN;

WITH THE

MINUTES OF EVIDENCE,

AND APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
6 *July* 1835.

Mercurii, 13° *die Maii*, 1835.

Ordered, That a Select Committee be appointed to inquire into the present state of the Harbours of Leith and Newhaven, and the best situation for constructing a Harbour in the vicinity of the City of Edinburgh, and the means of effecting the same, due regard being had to vested interests, and the rights of the Public:—And a Committee was appointed of—

Mr. Labouchere.	Lord Ashley.
Sir James Graham.	Sir John Campbell.
Mr. James Oswald.	Mr. O'Connell.
Sir Henry Parnell.	Admiral Adam.
Mr. Herries.	Mr. Bethell.
Mr. Hume.	Sir George Clerk.
The Lord Advocate	Colonel Leith Hay.
Lord John Scott.	Lord Dalmeny.
Mr. Grote.	Sir William Rae.
Mr. Stewart Mackenzie.	Sir Edward Codrington.
Mr. Fergus.	Mr. William Ord.
Mr. Charles Wood.	Mr. Evelyn Denison.
Mr. Aaron Chapman.	Mr. Hawkins.
Mr. Shaw Lefevre.	Mr. James Loch.

Ordered, That the Committee have power to send for persons, papers and records.

Ordered, That Five be the Quorum of the Committee.

Lunæ, 6° *die Julii*, 1835.

Ordered, That the Committee have power to report the Minutes of the Evidence taken before them.

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REPORT.

THE SELECT COMMITTEE appointed to inquire into the present state of the HARBOURS of LEITH and NEWHAVEN, and the best situation for constructing a HARBOUR in the Vicinity of the City of *Edinburgh*, and the means of effecting the same, due regard being had to Vested Interests and the Rights of the Public, and to report their Observations thereupon to The House, and who were empowered to report the MINUTES of the EVIDENCE taken before them to The House;——HAVE examined the Matters referred to them, and agreed to the following REPORT:

IT appears that the City of Edinburgh has long possessed, under ancient Charters and Acts of the Parliament of *Scotland*, the Harbour and Shore of Leith and Newhaven, and all the dues levied from them, with the exception of that which is denominated the "Merk per Ton," the proceeds of which are held in like manner under Charters and Acts of Parliament by the Clergy of Edinburgh. These dues and the "Merk per Ton" have been held subject only to such expenditure on the Harbour as their Rights and Charters make requisite, including the expenses of collection.

A full and detailed account of the nature and amount of the Receipts of the Harbour and Docks of Leith, will be found in the Appendix to this Report.

The first pecuniary transaction in which the Government seems to have been concerned with the City of Edinburgh, in respect to its Leith property, took place in 1800, when £.25,000 was advanced under the authority of the Act 39 & 40 Geo. III. c. 57, at five per cent. interest. The next transaction was in the year 1805, when a second sum of £.25,000 was advanced also, at five per cent. interest, under the authority of the Act 45 Geo. III. c. 115; subsequently to which the first £.25,000 was paid off. The next transaction took place in 1825. The Authorities of the City of Edinburgh had, under the sanction of various private Acts of Parliament, borrowed £.240,000 for the purposes of these Docks, beyond the £.25,000 which was due from them to the Government. By the Public Act now passed (6 Geo. IV. c. 103.) the Treasury was authorized to make a further advance of £.240,000 out of the Consolidated Fund, to enable the Authorities of the City of Edinburgh to take up the bonds which they had issued. This advance was made at the rate of five cent., of which three per cent. was to be the rate of interest, and two per cent. to go to a sinking fund. By one of the clauses, however, of the same Act, this annual payment was reduced to the rate of four per cent. for twelve years, in consideration of an agreement entered into by the Corporation with the Commissioners of the Navy to improve the Eastern Pier and the Works connected therewith. The security given to the Government was a preferable claim over the whole of the Leith Property, and a concurrent claim with other creditors over the entire Property of the City of Edinburgh;

other stipulations were connected with this transaction, by which a part of the Docks and Shore-ground was ceded to the Admiralty.

The present state of the pecuniary relations of the government of the City of Edinburgh is this ; of the original Debt of £.265,000, the sinking fund has cleared away about £.25,000 ; but there is now an arrear of payment for the last twelve months, both on account of interest and of the sinking fund.

In 1833 the City of Edinburgh was declared to be insolvent. A full account of the revenues and obligations of the Corporation will be found in the Appendix.

It is universally admitted, that the Harbour of Leith in its present state is very inadequate to the accommodation of the trade of Edinburgh and of the Frith of Forth, and especially to the important branches of Steam Navigation and the Ferry communication between the opposite shores of the Frith. The attention of the Government has been called, at various times, to the deficiency which exists in this respect ; and indeed the hope of removing it appears to have been the principal inducement held out to Parliament in 1825 for the large advance of public money which was made to the City of Edinburgh. Various schemes for the construction of a low-water Pier, and for the improvement of the present entrance to the Harbour of Leith, or of making a new one to it from the westward, have been suggested by Civil Engineers of great eminence and experience. Other Harbours have also been projected in the vicinity of Edinburgh, especially at Trinity and at Granton. Your Committee have received much conflicting evidence on the expediency and estimated expense of carrying into effect both these schemes, which they beg to submit to you, without venturing to express any opinion of their own upon them. Mr. Cubitt, on the other hand, who was lately sent down by the Government to investigate the whole subject, recommends in his Report to the Admiralty, that a Western Entrance should be made into the present Harbour of Leith, and estimates the cost of such an undertaking at about £.125,000 ; while Mr. Walker gives it as his opinion, that the present Entrance might be deepened by the construction of works to the eastward at a far less expense.

Your Committee feel it to be quite impossible for them to recommend to Parliament that a further advance of Public Money should be made in order to carry into effect any of the schemes for the improvement of Leith which have been described, and it is manifest that the City of Edinburgh, in their present state of insolvency, cannot raise any money to effect such an object. And when your Committee consider how important it is that adequate accommodation should be afforded to the trade and intercourse of this part of Scotland, they are prepared to say, that no obstacles should be permanently opposed to any private enterprise which should offer a reasonable prospect of supplying the existing deficiency. At the same time it is obvious, that if Leith remains unimproved, and a rival Harbour is constructed in its vicinity, it is to be expected that its trade and revenues will be greatly diminished, the affairs of the City of Edinburgh involved in inextricable confusion, and the security of the Government Debt, together with the claims of the other creditors of the Corporation, exposed to extreme hazard.

Upon a careful consideration of the whole of this complicated question, Your Committee have come to the conclusion, that they are justified in recommending to Parliament to abandon or suspend, either wholly or in part, the debt now due to the Government from the Corporation of Edinburgh,

burgh, provided that adequate public objects can be accomplished by this remission. It appears to them, however, that it is impossible to entertain any hope of effecting such objects, unless the other parties interested shall approach the consideration of the proposed arrangement in a spirit of mutual sacrifice and concession.

The points of the greatest importance to secure appear to Your Committee to be,—to limit the claims of the Creditors of the City of Edinburgh, and to effect a composition of their amount upon fair and equitable terms; to dissever the connexion which at present exists between Leith and the Corporation of Edinburgh, on conditions that shall be just towards that Body, and to vest the property and management of the Port in Commissioners, under suitable regulations, which should provide for its maintenance and for any improvement of it, which, upon mature consideration, might be deemed practicable and expedient; to reduce, equalize and simplify the Dues of Leith, and especially to relieve its trade from the payment of the "Merk per Ton," upon adequate compensation being secured to those who are now entitled to it.

July 1835.

LIST OF WITNESSES.

Lunæ, 18° die Maii, 1835.

Alexandar Young Spearman, Esq. - p. 1
William Cubitt, Esq. - - - 6
Mr. *John Gibb* - - - - 13

Jovis, 21° die Maii, 1835.

Mr. *John Gibb* - - - - 17
Lieutenant *Allen George Field* - - 19
Mr. *John Miller* - - - - 25

Veneris, 22° die Maii, 1835.

Philip Flucker - - - - 33
Mr. *John Gibb* - - - - 38
James Jardine, Esq. - - - 39

Martis, 26° die Maii, 1835.

Mr. *Richard Fraser* - - - - 42
James Walker, Esq. - - - 44
Charles Cunningham, Esq. - - 54

Veneris, 29° die Maii, 1835.

Mr. *William Marshall* - - - 61
Mr. *George Logan*, w. s. - - - 62
Andrew Miller, Esq. - - - 63
Mr. *Andrew Richardson* - - - 68
Mr. *David Wallace* - - - - 71
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Mr. *William Bain* - - - - p. 81
James Anderson, Esq. - - - 88
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Mr. *Patrick Dall* - - - - 104
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Sir *John Rennie* - - - - 121
Mr. *John Gibb* - - - - 123
Mr. *James Stuart* - - - - 124
William Cubitt - - - - 125
Captain *George Thomas*, R. N. - - 126
Charles Vignoles, Esq. - - - 130
Mr. *Charles Cunningham* - - - 131
Mr. *Robert Christie* - - - - 131
Mr. *William Marshall* - - - 133
Mr. *John Phin* - - - - 134

Mercurii, 17° die Junii, 1835.

Colonel *George Wright* - - - 140
John Mitchell, Esq. - - - - 141
Philip Flucker - - - - - 150
John Mitchell, Esq. - - - - 150

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MINUTES OF EVIDENCE.

Lunæ, 18° *die Maii*, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Alexander Young Spearman, Esquire, called in; and Examined.

A. Y. Spearman, Esq.

18 May 1835.

1. WHAT situation do you hold at the Treasury?—I am Auditor of the Civil List.

2. Have the transactions which the Treasury have had with the city of Edinburgh with regard to the docks at Leith come under your cognizance?—Yes, very considerably so.

3. Are you able to give to the Committee any account of those transactions?—Yes, I think I am. The first pecuniary transaction in which the Government appears to have been concerned with the city of Edinburgh in respect of those docks, took place in consequence of the Act of the 45th George III. c. 115, by which the Treasury, on the ground stated in the Act, were authorized to advance 25,000*l.* from the Consolidated Fund, to be applied to the purposes of the docks, at five per cent. interest. By one of the sections of the Act, all the rates and duties arising from the harbour and docks and works, and all the estate, right, title and interest of the Lord Provost and magistrates and council and their successors in office in and to the same, and all quays, houses, lands and other property purchased for the purposes of the said harbour, basins, docks and other works, were assigned to the Chief Baron and other Barons of the Court of Exchequer as a security for the said sum of 25,000*l.* so advanced. The next transaction was that which took place in 1825. The authorities of the city of Edinburgh had, under the sanction of various local and personal Acts of Parliament, borrowed 240,000*l.* for the purposes of these docks beyond the 25,000*l.* which the public had advanced. They had issued their bonds to the extent of that 240,000*l.*, and in the year 1825 an Act of Parliament was passed authorizing the Treasury to advance, out of the Consolidated Fund, 240,000*l.*, to enable the authorities of the city to take up those bonds, the whole of the rates of the harbour being vested in the Barons of the Exchequer of Scotland till the whole of that 240,000*l.* should be paid off. That advance was to be made at five per cent.; of which three per cent. was to be the rate of interest, and two per cent. of sinking fund.

4. Do you know what was the state of the finances of the city of Edinburgh at the time this loan was made?—No, I do not. By one of the clauses of the Act, it is declared that it would be of advantage to His Majesty's service, and to the trade of the port of Leith, that the entrance to the said harbour at Leith should be improved; and it was enacted, that if the city of Edinburgh should enter into an agreement and bind themselves to extend the eastern pier, and to lay out a sum not exceeding 28,000*l.* upon it, then that the Treasury might reduce the interest payable from five per cent. to four per cent. for twelve years. By the same Act, the city were empowered to convey to the Commissioners of the Navy so much of the wet docks and so much of the shore-ground as was necessary for the construction of a naval yard. They entered into the agreement, and the interest was reduced to four per cent. for the twelve years.

A. Y. Spearman, Esq.

18 May 1835.

5. Do you know whether the corporation of Edinburgh at that time had the power of diminishing the dues of the port of Leith at their own option?—I believe they had, but I cannot speak positively to that point.

6. There was nothing in this Bill to prevent them from diminishing the dues of the port of Leith till this debt had been paid off?—Nothing whatever. This Act did not touch any of the rights which they had under any previous Acts of Parliament as to the mode of managing the docks and harbour.

7. Were any privileges acquired by the Admiralty under that Bill?—That part of the wet docks and shore which was necessary for naval purposes as a naval yard was to be conveyed to the Commissioners of the Navy. It would seem, from the Act, that one of the considerations for lending the 240,000*l.* was, that the city of Edinburgh was to make a grant of a part of the shore and wet docks for the purposes of a naval yard. The authorities of the city have paid the interest and sinking fund up to the 1st of March 1834. I should have stated to the Committee, that by the Act 6 George IV. c. 13, the interest at five per cent. upon the first 25,000*l.* was reduced to three per cent.; so that from the time that Act passed, 25,000*l.* bearing interest at three per cent., and 240,000*l.* bearing interest at three per cent. and two per cent. sinking fund, was the state of the debt until the interest and sinking fund on the latter was reduced to four per cent. for twelve years.

8. Has there been any subsequent transaction between the Treasury and the corporation of Edinburgh?—A transaction took place between the Treasury and the city of Edinburgh in consequence of the state in which the city was with respect to its private creditors. By a local and personal Act of the 3d and 4th of William the Fourth, trustees were appointed, to whom the whole of the property of the city was to be conveyed, and clauses were put into that Act reserving the right of the Crown over the dock dues and over the shore dues. Some doubts appear to have been entertained whether the Crown securites extended over the shore dues as well as over the dock dues, and clauses were introduced into the Act to place the matter beyond any doubt, by declaring what had been the clear meaning and intention both of the Lord Provost, Magistrates and Council of the city of Edinburgh and the Government, viz. that the security of the Government for the loans should be upon the shore dues as well as the dock dues. The state of the liability at present is this: the city has paid at the rate of three per cent. on the 240,000*l.* with the one per cent. sinking fund upon it, and also three per cent. interest upon the 25,000*l.* up to the 1st of March 1834. The last payment was made in the month of December 1834, and it cleared off every thing up to the 1st of March preceding; so that, in point of fact, at this moment the interest and sinking fund is twelve months in arrear.

9. Do you happen to know the state of the receipts?—I have a printed paper which shows what the income is, but what the present state of their pecuniary resources is I do not know.

10. Do you know what prospect has been held out by the city of Edinburgh of the payment of the arrears?—In consequence of the payments continuing in arrear, the Treasury wrote to the proper officer in Scotland to desire that he would communicate to the Lord Provost the necessity of making the payments. There is a power in the last Act which authorizes the Treasury, if the interest shall be in arrear three months, to take possession of the docks. The Treasury have not thought it expedient to do that, but have left them in the hands appointed by law to administer them; but, in consequence of the application of the Treasury, a committee of the magistrates and town council proposed, in order, as they stated, to give the most unequivocal assurance that every sixpence of the rates and duties over which the security of the Government extends should be faithfully applied towards the interest and sinking fund, until the whole arrears were paid up, that whatever monies came into their hands, after defraying the charges of management, should be paid over to the officers of the Government from time to time, instead of making half-yearly payments. The Treasury objected to that course, and stated that it would be more convenient and better, that the payments should be made at the fixed periodical times specified in the deeds. The Treasury further desired that such arrangements might be made as would ensure such regular payments. They have been assured that this should be done. They have been informed that the

twelve

twelve months' interest, which had been in arrear up to the month of March 1833, and had been liquidated one half at the latter end of 1833, and one half in the early part of 1834, had been paid by the application to such payment of the receipts of nine months only, and that there was every prospect if the receipts came in at the same rate, which there was no reason to doubt, that the arrears would be cleared away, while the current payments would also be made.

11. How did they account for the arrears having taken place at all?—It would appear that the arrear existed prior to 1833, in consequence probably of the pecuniary arrangements of the city.

12. Of how long standing were the arrears which were paid up in December last?—The payment then made was due on 1 March 1834; the payments being due half-yearly, the arrear is now an arrear of twelve months. The existing state of the debt is this, the operation of the sinking fund has reduced the 240,000*l.* to 214,917*l.*, so that in point of fact they now owe to the public 239,917*l.* Of the original debt of 265,000*l.* the sinking fund has cleared away about 25,000*l.*

13. That is the present state of the transaction?—It is. If the other twelve months' interest, which was due in March were now paid, there would be 3,000*l.* more of the original debt paid off.

14. Will you have the goodness to state to the Committee anything that you know of the circumstances under which Mr. Cubitt was sent down to examine the harbour of Leith?—The ground upon which Mr. Cubitt was despatched to Leith, is stated in this Treasury minute: "My Lords have before them the papers relative to the Leith Docks, and adverting to the large amount of public money which is bound up in the success of these docks, as well as the other circumstances of the case, consider it advisable that an inquiry should be instituted without delay into the expediency and practicability of extending the accommodation at the Leith Docks. Write to Mr. Barrow, transmitting to him a copy of this Minute, and request he will lay it before the Lords of the Admiralty, and move their Lordships to take such steps as they may consider advisable to institute such an inquiry, and that they should inform this Board of the result." Upon that the Admiralty despatched Mr. Cubitt.

15. Have you any documentary evidence that would be material for the Committee?—Perhaps it would be as well if I were to read to the Committee the last Treasury Minute upon this subject. A representation came from the proprietors of steam vessels at Leith respecting the improvement of the Leith Docks and Harbour; a representation at the same time came from Mr. Scott upon the subject of the proposed harbour and low water pier at Trinity. The Admiralty, in transmitting Mr. Cubitt's Report, had expressed no opinion upon the subject; and in order that the Treasury might be fortified with the best nautical opinion thereupon, a Minute of Treasury in the following words was drawn up on the 30th of January 1835: "My Lords read the Minute of this Board on the 25th of July last, requesting that the Lords of the Admiralty would take such steps as they might consider advisable to institute an inquiry into the expediency and practicability of extending the accommodation at the Leith Docks, the Board of Treasury being of opinion that such an inquiry should be instituted with reference to the large amount of public money bound up in the success of those docks. My Lords have before them the letter from the Secretary of the Admiralty of 18th September, transmitting, for the information of this Board, a copy of a Report from Mr. Cubitt, civil engineer, whom the Lords of the Admiralty had sent to consider the best mode of improving the harbour and docks at Leith. My Lords have also before them the Memorial of the proprietors of steam vessels, &c. at Leith respecting improvements at the Leith Docks and Harbour, dated 21st November; the Letter of Mr. Scott, dated 10th November, relating to the proposed harbour and low-water pier at Trinity, near Edinburgh; the Report of Messrs. Stevenson & Son, civil engineers, relative to Granton Harbour; and the Plan and Report of Mr. Anderson on the present state of Leith Harbour, and the practicability of rendering available its Wet Docks. In the letter from the Lords of the Admiralty, no opinion is expressed on the subject of the suggestions and recommendations of Mr. Cubitt. My Lords however, feeling how deeply the public is interested in the matter, on account of the large sums advanced to the city of Edinburgh, the security for the repayment of which is the revenue

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arising from the harbour and shore dues, and considering how necessary it is, not on that account only, but on account of the interests of the city of Edinburgh and of the town of Leith, that they should be advised upon this whole subject by the highest nautical authorities, they desire that the whole of those papers may be transmitted to the Lords of the Admiralty, that their Lordships' attention may be called to Mr. Cubitt's Report, and that they may be requested to report their opinion to this Board upon these various plans and recommendations, when My Lords will be enabled to consider and determine what course the interests of the public will require them to take in the matter. Write to the Secretary of the Admiralty accordingly." To that no reply has been received; so that, in point of fact, the whole subject is under consideration of the Board of Admiralty at this moment.

16. Are there any other facts relating to this subject that have come before you?—An alteration of the shore dues was proposed to the Treasury by a committee of the magistrates and town council, to which the Treasury consented, in the belief that it would, as stated by the town council, have the effect of increasing the trade.

17. Can you state what that alteration was?—I can deliver in the Letter, showing what was proposed by the committee of the town council, and to which the Treasury consented. This was in the month of September 1834.

18. Was there any application made by the creditors upon that occasion?—Not upon that occasion; but a remonstrance was made subsequently. I will put in the application, and the Treasury Minute upon it.

[*The Witness delivered in the same, which was read, as follows:*]

Sir, Edinburgh, 10 Sept. 1834.

I AM requested by the magistrates and council of this city to call the attention of the Lords of the Treasury to the Act (29 Aug. 1833) "to appoint Trustees for the Creditors of the City of Edinburgh," by the 17th Section of which it is enacted, with reference to the dues at the port of Leith, "That it shall not be lawful for the said Lord Provost, Magistrates and Town Council, after the passing of this Act, to increase or reduce, or vary the said rates, duties, dues or revenues, or any of them as at present collected, arising from the said harbour, docks and other works, quays, houses, lands or property, without the consent and approbation of the said Commissioners of His Majesty's Treasury, or any three or more of them, thereto had and obtained." The magistrates and town council are required by law to levy "towards the maintenance of the ministers of Edinburgh, a custom of 13*s.* 4*d.* Scots, on each ton and pack of goods imported by sea or land, in and to the burgh of Edinburgh and towns of Leith and Newhaven and liberties of the same;" but they are at the same time entitled, "during pleasure, to give such abatement of the aforesaid merk per ton," as this custom is commonly denominated, "on such kinds of goods as they shall think proper, and even wholly to free certain articles for the encouragement of trade to the said port of Leith" (28 George III. cap. 58. sec. 25.) A variety of complaints having been made regarding the manner in which the shore dues and merk per ton are charged on different commodities, particularly on some of great bulk, compared with their weight and value; the magistrates and council lately appointed a committee to inquire into the subject, by whom it was ascertained, that from the circumstance of the different articles imported being assumed to contain a certain number of barrels' bulk to the ton weight, fixed arbitrarily and without reference to the true proportion, the effect was to charge for the description of goods referred to, in some instances, from two to three merks on each ton weight, and shore dues in the same proportion. I enclose for the information of the Lords of the Treasury, a copy of the Report of the committee, which has been approved of by the magistrates and council, who have given orders for carrying into effect the recommendations therein contained, in so far as they relate to the merk per ton, from and after the 14th current. Previously, however, to acting upon the recommendations of the committee, in relation to the shore dues, the magistrates and council are desirous of receiving the consent and approbation of the Lords of the Treasury in terms of the clause in the City's Trust Act, quoted above. The town council are satisfied that the proposed alterations will not reduce the revenue derived from the port, but on the contrary, by increasing the trade will ultimately add to the revenue. It was ascertained by the committee, in the course of their inquiries, that manufacturers in the city and neighbourhood who use large quantities of some of the articles specified, are induced by the injudicious mode of ascertaining the ton, and the large per centage consequently incurred for shore dues on the value of the goods, to import cargoes at the harbour of Fisher-row, where the dues are charged on a more equitable principle, and at much lower rates, although it would be more convenient for the parties to import them at the harbour of Leith. The alterations suggested by the council on the mode of levying the rates, combined with the superior accommodation at the port of Leith, as compared with Fisher-row, will induce parties in many cases to land their cargoes at the former port, in preference to the latter, and consequently materially benefit the port of Leith. Since the end of November last, when the Trust Act came into operation,

tion, every shilling of the dock and harbour revenue over which by that Act the security of the Government extends, has been kept quite distinct from the other revenues of the city, and after paying the necessary expenses of management and repairs, has been faithfully applied in payment of the interest and sinking fund due to the Treasury. It will be satisfactory to their Lordships to know, that the sum of 10,350*l.* paid to the Exchequer on the 3d of April and 22d of August last, in equal portions, being the interest and sinking fund on the debt due to Government for one year, has been derived solely from the dues collected during the nine months the revenues have been under the charge of the present town council; and by persevering in the same course of economical management, the arrear of one year's interest and sinking fund still due will be speedily discharged. I have only in conclusion to beg, that you will favour me with an early answer to this communication.

A. Y. Spearman, Esq.

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To the Secretary of the Treasury,
Treasury Chambers, London.

I have the honour to be, Sir,
Your most obedient Servant,
(signed) *James Spittal*, Lord Provost.

REPORT OF COMMITTEE ON MERK PER TON.

Edinburgh, 2d September 1834.

Present:
Bailie Donaldson,
Councillors Grainger, Macaulay, M'Laren.

The Committee to whom was remitted on the 17th of June, "to inquire whether any, and if any, what alterations ought to be made in the mode of levying the merk per ton, so as to relieve the trade of the port of Leith," having carefully considered the subject remitted to them, beg leave to report as follows: First, As respects the first part of the remit, the Committee have no hesitation in reporting, that the mode of levying the merk per ton on some articles of great bulk compared with their weight and value, is injudicious, and ought to be altered so as to relieve the trade of the port of Leith: Second, After communicating with the collector of shore dues as to the articles which have been most complained of, and as to the alterations which ought to be made, the Committee are of opinion, that from the 14th of September, the collector of shore dues should be authorized to levy the merk per ton on the articles herein enumerated, in the following manner, during the pleasure of the council; first, that screws should be charged eight barrel bulk to the ton of 20 cwt.; second, that straw-wold and sea-grass should be charged 16 barrel bulk to the ton of 20 cwt.; third, that brooms should be charged three dozen to a barrel bulk; fourth, that cotton wool by general vessels, from London, Hull and Newcastle, should be charged eight barrel bulk to the ton of 20 cwt.; fifth, that dry hides, kip and calf-skins, both loose and in bales, by general vessels, should be charged 12 barrel bulk to the ton of 20 cwt.; sixth, that rags by general vessels should be charged eight barrel bulk to the ton of 20 cwt.; seventh, that bark by general vessels should be charged eight barrel bulk to the ton of 20 cwt.; eighth, that cork by general vessels should be charged 16 barrel bulk to the ton of 20 cwt.: Third, That when the mode of charging any other description of goods is generally complained of, such additional alterations ought to be made from time to time as will obviate all reasonable grounds of complaints: Fourth, That in order to prevent additional trouble to the collector of shore dues, and the chances of errors in his accounts, the shore dues on the above description of goods should be collected in the same manner as the merk per ton, during the pleasure of the council.

(signed) *D. M'Laren*, Convener.

MINUTE OF THE TREASURY.

3d October 1834.

My Lords read the letter from the Lord Provost of the city of Edinburgh on the subject of a proposed reduction of the merk per ton dues, and of the shore dues in the port of Leith, together with the Report of the committee of the town council thereupon. Write to the Lord Provost, and state, that upon the responsibility of the town council, and under their recommendation, My Lords approve of the proposed alterations in the mode of levying the shore dues in the articles enumerated in the Report of the committee. State at the same time that it would be satisfactory to My Lords to receive a Report at the expiration of one year, showing what has been the effect of this alteration. Acquaint the Lord Provost also that My Lords will hereafter communicate with him on the subject of the pecuniary arrangement and transactions of the city of Edinburgh in discharge of the debt to the public.

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19. What was the nature of the remonstrance?—It is a remonstrance made by Lord Roseberry, in the name of the trustees of the creditors of the city of Edinburgh, against any alteration of the dues which would affect their interests, seeing that they were interested next immediately after the public. The answer

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of the Treasury was to the effect, that the alteration had been made upon the responsibility and upon the recommendation of the town council. The Treasury held that they were perfectly at liberty to sanction the alteration without any communication with the creditors; but that, as their interests were exactly the same, as in point of fact the Treasury could have no interest as trustees for the public but that of procuring repayment of the debt due to the public as fast as possible, and as it was the interest also of the trustees of the city that that repayment should take place, their Lordships would in future, in case of any such alteration being suggested by the town council, communicate with the trustees before they gave their sanction to it.

20. Are you aware whether the lowering of the shore dues took place in consequence of this?—I have no personal knowledge of the fact, but I take for granted that it did.

21. Do you know what the effect of it was?—They were desired to report within twelve months what the effect of it was, but the Treasury sanction was only given in September 1834.

William Cubitt, Esquire, called in; and Examined.

William Cubitt, Esq.

22. WILL you state the circumstances under which you were sent by the Admiralty to examine Leith Harbour?—By an order from the secretary, then the Honourable George Elliot, to go to Leith and examine Leith Harbour.

23. What was the nature of your instructions?—The instructions I will read, dated Admiralty, the 2d of August, signed George Elliot. "I am commanded by the Lords Commissioners of the Admiralty to desire you will proceed forthwith to Leith for the following purpose:—1st. To examine the present harbour, docks and piers there, and the facilities for vessels reaching them. 2d. To report on the best method of obtaining the deepest water for ingress and egress, whether by means of improving the present entrance towards Newhaven. 3d. To state the comparative advantages and probable expenses of each of these methods. 4th. To point out any other plan that may suggest itself to effect the object of making the present docks available for all the purposes contemplated in their erection. 5th. To state the probable effects which might arise from the professed construction of Granton or Trinity or other docks to the eastward of Newhaven, which would project beyond the high-water line; and I send you herewith certain plans bearing upon the question, which are to be returned when you make your report. Your most obedient servant, *George Elliot.*"

24. Have you given in a report to the Admiralty?—I gave in a report. In consequence of those instructions, I went to Leith and examined the locality, and returned and made a report.

25. Will you state the general conclusion you came to?—The general conclusion I came to was, that all the interests involved in the question that I could learn would be best served by making a tidal entrance at Newhaven, or near Newhaven, to communicate with Leith Docks and the harbour at Leith.

26. What was the nature of the new works you proposed to construct to improve the harbour of Leith?—To enclose a certain portion of the strand and the Frith by means of rubble-stone breakwaters, and within the space so enclosed to excavate a low-water channel for vessels to reach both Newhaven Pier and Leith Docks.

27. What is the amount of the estimate which you gave in for those proposed works?—The amount of the estimate I made was 125,000*l.*

28. Do you feel confident that the works you have spoken of could be done for that sum?—I think they could for that sum, as I proposed them.

29. Do you also feel confident that the works you propose would be able to withstand the action of the sea, and would afford a deep-water channel sufficient for the purposes of trade?—I have no doubt of it whatever.

30. You stated that you reported that, for all the general interests connected with it, the best plan would be to make an entrance from the Newhaven side to the docks and the harbour of Leith?—I did.

31. You were down in August last?—I was.

32. Did you at that time make an actual survey of the shore between Newhaven and Leith?—No; my estimate was founded upon official documents that I found there, principally on Dall and Leslie's survey. I did not go to make a particular

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a particular survey; it would have taken a long time, and involved a great expense. I went to give an opinion to the Admiralty as to what I thought best, and the expense of the plan that I proposed.

33. Are the Committee to understand that you did actually survey the harbour of Leith, but not the coast towards Newhaven?—I did not actually survey any thing otherwise than the height of some tides to verify some tide gauges. There was a dispute about whether the channel was deepened or otherwise from Leith outwards.

34. Consequently, the information upon which you came to the conclusion with regard to the other localities depended upon documents, and not actual survey by yourself?—Upon documents and personal inspection, but not absolute survey.

35. What was the state of the weather when you were there; was it stormy?—No; moderate weather. There were some breezes of wind, but not what I call stormy.

36. Was it such as to enable you to form a judgment of what might be the effects of stormy or bad weather?—Yes.

37. And your opinion with regard to the harbour of Leith was founded not upon the situation of the weather and the state of the sea at that time, but as to the probability of what it would be in the event of stormy bad weather?—Exactly so; from evidence I heard upon the spot also.

38. What is the depth of the harbour at the entrance?—Rather more than twelve inches below the present dock sill.

39. What is the depth of the harbour inside?—The depth of the harbour inside is not deeper than that; the deepest part of Leith Harbour now is the channel and entrance, except what is washed away below the bridge, which may be a little deeper.

40. Of course you anticipated, in the event of making the channel proposed, that it would be necessary to dredge to a considerable extent?—It would be necessary to dredge, as being the cheapest method of making it.

41. Did you come to any understanding with regard to the amount of dredging that would be found necessary?—Certainly, from having done a great deal of dredging in deep water.

42. Would dredging be a recurring expense in the event of this harbour being constructed, or when it was once done, would it last a long time?—That would depend upon circumstances. All such harbours may be subject to a little silting up (provided there are no fresh water streams come down into them) if the flood tide, which fills them, brings in much silt or sand in suspension. In the case of the Kingston Harbour, which is a harbour gained off from Dublin Bay by open breakwaters, they enclose a very fine harbour, and hitherto there has been no necessity in the last fifteen or sixteen years for dredging that at all.

43. Was your observation to an extent that enabled you to judge whether or not there might be obstructions to deepening the channel that could not be removed by dredging?—I believe there are no obstructions of that kind existing there. I believe there is no rock in the line pointed out; if there be, of course it would cost more than I estimated.

44. Supposing the plan you have suggested was to be carried into execution, what length of time do you suppose would be occupied in completing the work?—Supposing funds were ready as fast as they were wanted, two to three years to do it as fast as it could be done.

45. In the event of its being determined to carry into effect the plan you have proposed, could the harbour be made available for the trade during the intermediate time? would it have any effect upon the entrance to the harbour during the progress of it?—The present harbour would remain exactly as it is; if it was required to make a new harbour in the place I have pointed out, the harbour might be commenced, or the breakwaters might be thrown out, very quickly. For instance, the entrance at Newhaven might become available for steam vessels landing their passengers and light goods very soon; again, dredging the entrance channel from that, while the other pier was forming, the ferry boats might get up to the beginning of Newhaven Pier long before the harbour would be completed; the last part would be getting up to Leith Docks for the entrance there, so that it might be available in one year; it might be more available in two years, and it might be completed in three years.

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46. In your report, you have stated that one of the advantages to be obtained will be making Newhaven Pier accessible for the steam ferry and steam boats at all times of the tide; how is that provided for?—Because there would be access made to the wharf, and they would thence have a greater depth of water than the vessels draw, and consequently access at all times of the tide.

47. You propose cutting an interior channel two feet deep at the outer end; what provision have you made for deepening the channel on the outside of the entrance?—It was so stated only in getting the dimensions of a solid in estimating the quantity to be removed; the two feet would run off in dredging to a point like a wedge.

48. You state that you consider that all interests would be best served by adopting this course; do you mean by that the interest that the Government has, or do you mean with reference to what would be most beneficial to the trade, and also with reference to individual property as well as with reference to the interest that the Government or the city may have?—My opinion is this, that if another harbour were made in the vicinity of Leith, Leith standing as it is, all the trade of Leith would not go to this new harbour; some of it might, and there would be a division of interests, and thus neither would have enough to keep themselves up and pay the costs; whereas, by making an entrance to the present harbour and docks of Leith, if there should be a sufficient entrance for the purpose of steam vessels and vessels of a larger draught than can now come to Leith, the interests of Leith as a port would be preserved, the interests of the docks would be preserved and improved by having an entrance which would get steam vessels in, and the interests of the steam companies now in existence would be preserved, because they would have a low-water entrance and a mode of unloading their passengers without doing it by boats. Those are the interests that would be promoted by making an entrance at the west of Leith, and perhaps others. I never was at Leith before that time, nor am I acquainted with any interests there more than I could judge at that time.

49. Is the present state of the Harbour at Leith extremely inadequate to the wants of commerce?—The present state of the Harbour of Leith is, in my opinion, inadequate to the present state of navigation up the Frith, inasmuch as there is an entire new system of navigation introduced by steam, which did not exist when that harbour was formed.

50. Do you mean to say that all the commerce connected with Edinburgh would be best promoted by improving the harbour that you have pointed out?—I do not say the manner I have pointed out is the best possible manner, but it would be best served by making an entrance to the harbour and docks at Leith, without making separate establishments.

51. Do you consider that the Admiralty property at Leith can be of any material value to that department?—It would depend upon circumstances which perhaps I am not well acquainted with; it would depend upon whether there was a war likely to take place; if a war took place, it would be very desirable to bring the Admiralty property to the water-side.

52. Would the harbour that you propose to construct be available to vessels of war?—It would be available to Government steamers and to frigates; frigates might come into the dock.

53. Supposing that they did not get into the dock in one tide, would not they be obliged to lie aground?—They would dry about three feet. Supposing a frigate trimmed to seventeen feet, which I believe is the utmost that the docks will take; there is twelve feet depth in the channel; of course, twelve feet is not seventeen, but at the same time the channel itself might be deepened to have a frigate lie afloat inside the channel along the wharfs.

54. Then the channel would be seventeen feet water at low water at the extreme of the breakwater?—No, at the average of tides twelve feet at low water. I propose to dredge the entrance twelve feet below ordinary tides, and I think it will be found ten feet below the spring tides. There would be a twelve feet entrance, and twelve feet carried up to the western entrance of the docks.

55. So that a ship drawing twelve feet water would always lie afloat?—More than that, if it was thought necessary to keep the inner harbour dredged out to the proper depth.

56. You do not propose to hang up any gates at the outer entrance?—No, one at the lock entrance, but not otherwise; gates so near the swell of the sea would be improper.

57. Presuming

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57. Presuming that there were no docks at Leith, would the situation where Leith Docks are now placed, be a situation you would choose for making docks for the port of Leith and Edinburgh?—I do not know but it would, in order to make docks connected with Leith.

58. Suppose no money had been expended at Leith on those docks, would the site where they are now placed be the exact site that you would choose?—I should have then to choose from circumstances whether there was business enough to divide into two stations, or whether to make one as available as possible.

59. As an engineer, would this be a situation you would choose, or would you not put your docks in a place where there was more water and easier access?—I would never put the docks in such a situation that the gates had to be near the swell of the Frith in bad weather. It is necessary to distinguish between a harbour and a dock; if you make a harbour, you might make a much better harbour in the vicinity of Edinburgh than Leith harbour, but I do not think you can make docks alone in the vicinity of Leith in a better place than Leith, because you would have to run the dock out into the sea without being covered by a good outer harbour, and therefore I endeavoured to avail myself of the situation of the present docks, by sufficiently covering the entrance to make it good from the westward with deep water, in proportion as it is now from the eastward with shallow water.

60. Then your report respecting the improvement of the harbour at Leith, and your opinion with regard to what could be done there, was not founded upon your believing that Leith was a better site for a harbour than other places; it was in consequence of your knowing what had been done there, and that docks had been made there, but not supposing that it was a better site for a harbour than either Trinity or Granton?—I was not sent to see whether Trinity or Granton would be the best harbour, or to plan a harbour distinct from Leith, but to examine Leith Harbour and Docks, taking into consideration how they then stood with regard to their localities and trade now in them, and to say whether any thing could be done, preserving those interests, other or better than making a new harbour.

61. You were understood to state, that if you had been sent to report which was the best place for a harbour in the vicinity of Edinburgh, you would not have selected Leith?—No; I said that if a harbour alone was in question, a better place for a harbour might be found than in the vicinity of Leith.

62. Supposing Leith was out of the question, which should you say was the best point in the vicinity of Edinburgh for making a new harbour?—A good harbour might be formed at either Trinity or Granton, but I think the best harbour at the least expense at Granton, inasmuch as that is a harbour in all its points as well as docks, and the Trinity plan is not a harbour as well as docks. A good harbour might be formed at either place, but the best at Granton, at a given expense.

63. Supposing there was no harbour either at Granton or Trinity, which of the two would be the best position for a harbour?—Granton.

64. Do you give this opinion as a civil engineer, without reference to the nature of the coast, the tides, the soundings and the depth of water, but that you have merely considered as a civil engineer where you think the best harbour might be constructed for the city of Edinburgh, without reference to the nautical part of the question?—You cannot decide the question of the best harbour without thinking of all those circumstances.

65. Then you consider that Granton, in every respect, either as to sand-banks or as to the soundings and depth of water, would be more eligible than Trinity? Yes, with the same money, and taking the facilities to be attained in the end.

66. In your plan, do you avail yourself of the pier belonging to the ferry trustees?—I do.

67. In recommending this plan, do you take into your view the existing state of the trade as it is now at Leith; and do you consider that the improvement of Leith Harbour would be the plan most beneficial to the existing trade?—I do, certainly; at Leith there are conveniences of every kind now in existence; there are warehouses, there are wharfs, there are merchants' establishments, and there is a trade which will still continue to be done there, and I believe nine-tenths of which is done in vessels under one hundred tons, and all you

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can provide for is the other tenth: but making a new harbour at Granton would not take away the trade, because they can never do it so cheaply as it is now done at Leith; but if half of it were taken away, Leith Harbour would not be able to be kept up so well, and what they would take away would not keep up a new harbour.

68. You state that you consider Granton preferable to Trinity as a site for a harbour?—Yes, when it is put to me without considering any thing of interests in the vicinity, but simply the question of a new harbour to be made for the city of Edinburgh. I should prefer making one at Granton to either Leith or Trinity; that is, leaving every thing else out of the question, but simply as a situation in which to construct a good and safe harbour.

69. Taking the comparison between Trinity and Leith, would the commerce existing upon that coast be more promoted by improving Leith harbour, or by constructing a harbour at Trinity?—I think by improving Leith harbour.

70. Have you had occasion to construct other harbours?—I have had occasion to do with a good many, and to construct one or two; but I have had occasion to do with some harbours lately similar in point of construction; that is, harbours taken off from the water, and not made in the mouth of rivers, as it is done at Ramsgate and it is done at Kingstown, and at some other places; but they are none of them water-tight harbours. It is very difficult to make a water-tight harbour into that depth of water in a tideway, except it is first inclosed to a large extent.

71. If the harbour was constructed according to your plan, do you think there would be any danger of the breakwater being carried away by the violence of the storms?—None at all; no more than Plymouth breakwater is carried away, and no more than Dublin and Kingstown piers are carried away.

72. Are those rubble breakwaters?—Yes, they are all rubble breakwaters.

73. Is the breakwater that you propose to make at Leith of the same construction as the breakwater at Plymouth?—Yes; it is solid up to low-water mark in the same way.

74. Have you superintended the construction of a similar breakwater at Kingstown?—I have had to do with Kingstown harbour in some degree. I have been down lately for the Admiralty about it as to the best mode of completing it.

75. Do you propose that this breakwater should be constructed in the same manner as that at Kingstown?—In the same manner up to low water, and above low water not so expensive; it is not necessary, because the work does not require it. It would be foolish to make a breakwater in the Frith of Forth equal to the breakwater at Plymouth, inasmuch as the work is more exposed to a heavier sea, and there are from 24 to 30 feet at low water; and here the utmost would be 12 feet at low water.

76. Have you found the breakwater at Kingstown stand according to your expectation?—Quite; and there has been some work recently done at Kingstown which is made exactly in the same way as I should make this, and it stands remarkably well indeed against very heavy seas.

77. What depth of water is there in the Leith Docks at high water at spring tides and at neap tides?—From 11 to 16 feet at high water in neap and spring tides.

78. Is a vessel drawing 16 feet water obliged to lighten before the can come in?—At a neap tide.

79. Are you aware that the slope of the breakwater at Kingstown is five to one, whilst what you propose is two to one?—Yes; the slope of the one at Kingstown below low water is not more than two to one.

80. What is the Kingstown breakwater founded upon?—Sand.

81. Is there no rock in the centre of it?—No; there is rock in the shore, but the bottom of the harbour is a very good sand.

82. Is not the breakwater itself likewise upon a rock?—No, certainly not; they threw it upon sand itself 24 feet deep, and there the outer slopes of the eastern pier of Kingstown harbour are in one place laid five to one, inasmuch as the sea is very heavy upon one of the sides.

83. Are you aware of the slopes of the Plymouth breakwater?—Four to one, part of it.

84. Do you refer to the inside of it?—In the inside it is two to one.

85. Are you aware that the slopes in the Plymouth breakwater are ten to one in

in some places?—I am aware that they have no slope at all; but the slopes properly so called have been dressed up at four to one.

86. In your estimate for the construction of this breakwater, of course you have taken into calculation the difference of expense in proportion to the size of the blocks of stone you would have to construct it of; do you consider that the size of the stones that would be requisite to make it effectual and to resist the force of the sea is not greater than you have estimated for?—I am satisfied the expense I have stated will cover stones of any size that may be required; the expense I have estimated them at is what they will come to with horse and cart, but there is no question that a railway will be laid down at the place to do it at half the expense; the sum I have estimated for is more than what they could be done for, and nearly double what we are paying at Dublin.

87. What do you propose to do with the stuff to be excavated from the channel?—Part of it to be made into embankment, part of it to make up the slopes upon the side, and part of it to be thrown away either into spoil or into the current of the river.

88. Do you think it would be safe to throw it into the current; might not it be subject to be washed in a way that would be prejudicial?—I think there are places where it would not; I think that putting it into the deepest and most rapid parts of the river it would sink there, and not form again; but the estimate is made for carrying it away, and not sinking it; it does not cost half so much to sink it.

89. Have you provided for the depositing of the stuff to be excavated?—I have, and I think the estimate will cover it all; it is an easier thing to estimate than masonry work of that kind upon the water, where the water must be pumped out. This is simply a matter of material to be deposited.

90. Are the Committee to understand that your impression with regard to this proposed harbour is, that it is more adapted to the trade of Leith as it is at present than to the anticipation of a trade that would be carried in large vessels?—Yes; my proposition goes for the accommodation of the steam trade, which is entirely new since the docks were built, and to the accommodation of West Indiamen and large vessels, which now have to lighten before they can come into Leith. The general trade of Leith is a trade that is done by smacks and vessels of about one hundred tons, or perhaps under, and it will still continue to be done by that class of vessels.

91. Do you consider that the London steamers could enter into the harbour, as you propose it?—I do not see why they should not; I do not see why they could not enter into a place two hundred feet wide rather than into a pair of lock gates; the object was to avoid lockage for them, which is a very serious thing, and very expensive to keep up, and very bad near the swell of the sea.

92. Supposing this harbour were to be altered in the way you propose, and that that alteration was completely to succeed to the extent you anticipate, do you consider that it would become a harbour that would then be essentially useful to the navy?—For frigates and all vessels under that class.

93. Is it your opinion that frigates could enter with safety?—Frigates would never come in except for docking and repairing; the whole place is not calculated for it, nor will you make any harbour in that part of the Frith that is calculated for that; their best harbour is the Roadstead. They have always plenty of hands and good ground tackle.

94. In the event of a gale of wind, do you apprehend that vessels could run with safety to the harbour you propose?—That would depend upon the gale of wind and the kind of vessel; I should say not very well. There are no harbours that can be made with very narrow entrances and very little space suitable for vessels to run for in a gale of wind; I cannot cut a harbour out of a bad situation that shall suit all cases, nor can any body do it in that part of the Frith at all; it is against the nature of the thing.

95. Are you aware of the plan of the Trinity Harbour?—I am aware of that, because it was pointed out to me by Mr. Scott and the promoters of the harbour.

96. Could the vessels run with equal safety into that?—It is not a harbour at all; it is docks; there is no harbour where a vessel could enter and swing, any more than they can upon my plan.

97. Are you not aware that there is an outer harbour proposed?—No, there is a breakwater in front of the other, but not to constitute an outer

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harbour, nor could they lock out and in, in bad weather; that is my opinion, so far as the Trinity Harbour plans were shown to me. Trinity Harbour is a set of docks built in the water of the Frith, with a pier built before them as a sort of protection to the lock gates, but not to constitute what would be called a harbour.

98. Then, from what you say of the want of safety there, it appears, that your impression is, that the Frith is a place where there is a great deal of sea, and where the vessels are subject to very stormy weather?—The Frith is very unquiet in gales of wind; a very unquiet short sea, and a most uncomfortable sea for vessels to get along stone piers or to enter dock gates.

99. Is not that a kind of sea that would be very apt to interfere with excavations, or with a channel constructed in the way you proposed to construct it?—No, because the channel is covered by the breakwaters.

100. Would not the entrance be liable to change very much from the circumstance of the excavation?—There is no excavation outside of it, and the excavation begins at nothing, and goes on as you get further in; the principle of the two things is very different; if you enclose a large piece of water off the sea leaving an opening, you make it a harbour, so that you can excavate channels in that inside part to bring vessels up to the wharf. It is easy enough to make a canal for the docks or to cut a stone harbour, but it never can be done in point of expense to be repaid again. I have no favourite scheme, but my object is simply to devise what can best be done with regard to the trade; there is not business enough for two harbours, and hardly enough for one.

101. The question is, whether it could be so constructed as to answer the end you anticipate; whether there are not reasons for supposing that, under all the circumstances of the Frith and the state of the tides after it was constructed, it might not answer the purpose?—Of all the plans for harbours I have seen, if one so constructed should not answer the purpose, then the others are still more unfit, for the reasons now mentioned.

102. Will you state in what respect Trinity Harbour appears to you unfit?—Trinity Harbour is proposed to be a set of docks built of solid masonry, projecting into the Frith to such a depth as to be ten to twelve feet at low water as far out as I should propose to go with an open harbour, and there is no space enclosed to cover the entrance to the docks, or for a vessel to anchor, or to come alongside a wharf, without passing through the lock gates, and then she is into a dock.

103. Is there not some protection in front of the docks?—Yes; but I think that would produce as much mischief as good; but that is going into the details of a plan which I have only examined in general.

104. Will you state in what respect you think it would be productive of mischief?—Because there is not room for a vessel to anchor or to swing; she would be exposed to the turmoil of the sea; whereas if a sufficient space was enclosed to let vessels into still water, as was the case with the Granton plans, I think that is the better plan; the Granton plan carries out the harbour with two long arms, and then building a dock at the upper end of those; and that I think is a sensible plan.

105. Have you not seen the steam-boats land their passengers at Trinity Pier when they could not land them anywhere else?—No; I understand that they have landed them there in rough weather, when they could not land at the other piers, or could not get into Leith. I know that they land with boats when they could not land at the piers, inasmuch as there is deep water at Trinity Pier. In the first place, the weather must be sufficiently fair to enable them to lie alongside a pier at all, and then at the Trinity there is deep water.

106. When you were upon the chain pier at Trinity, did you see ships unloading at Leith Roads for want of water to enter the harbour?—I believe there might be; I do not remember that fact precisely, but I believe a vessel had been in the act of lightering.

107. Have you seen the Ferry passage-boats from the Frith landing their passengers in small boats, in consequence of not being able to enter?—I believe they do sometimes; I believe I saw it, and I have no doubt that is the case.

108. Have you any doubt that there is deeper water at Trinity Pier than anywhere else?—I have no doubt of that; Trinity Pier goes into deeper water than Leith Pier or Newhaven Pier.

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109. Is the Trinity plan you have seen the one that is now before Parliament?—I do not know, but I suppose it to be the same thing.

110. You are not aware that there are two plans?—I am not; I am speaking of what the parties themselves submitted to me when I was at Leith.

111. You said that you do not anticipate, in the event of your plan being carried into execution, that it would require any great annual expense to keep the place open, and in a proper state?—No, I do not.

112. Did you make your survey with a view to the convenience of the public as a ferry station?—I did.

113. To which of those points do you give the preference as a ferry station?—I think, with the conveniencies already made, Newhaven is the best station for the ferry to Burntisland.

114. What is your opinion of Granton?—It would make a good ferry station, if good means were taken to land and discharge passengers at all times of the tide; if sufficient conveniencies are made, and sufficient depth for passengers to land at all times of the tide, then I think that is equally eligible, as far as the public are concerned.

115. Would it not be a dangerous anchorage at Granton from the vicinity to the Drum sand?—I think not.

116. Is your acquaintance with the locality, and the extent of that sand, merely from information, and not from personal observation?—Simply from the chart furnished to me; I know generally the coast; I think the shifting nature of that sand would not prevent a good harbour being made at Granton.

117. Would it not affect the safety of Granton as a harbour, and the facility of vessels running for it?—I think not; if I understand it right, it is a sand to the westward of the entrance of Granton, in the neighbourhood of Cramond Island; but I do not think much of vessels running for any of the proposed harbours in very bad storms; I think most vessels would rather keep in the Frith than run to those little places, because they have none of them any capacity for a vessel to run for and swing; they cannot be any thing but mere covers for commercial vessels to load and discharge at.

118. You have already stated, that in all material particulars you adhere to the opinions you have expressed in your report?—I do; the general conclusion remains the same in my mind, that it would be better to improve Leith at a given expense, than to make new harbours either at Granton or Trinity; such is my opinion now.

Mr. *John Gibb*, called in; and Examined.

Mr. John Gibb.

119. YOU are a civil engineer?—Yes.

120. What acquaintance have you with the harbour of Leith, and with the proposed harbours of Granton and Trinity?—I have been acquainted with the harbour of Leith upwards of 30 years, and in 1828 I was employed by Mr. Telford, when he was sent down under the direction of Government, to make a survey of Leith, and the coast to the westward, and the opposite coast of Fife, from Burnt island, Pettycur and Kinghorn, and so on, with a view both to the improvement of the harbour of Leith, and also the Fife and Midlothian ferries. I was employed at Leith during the time of the formation of the foundation of the first docks.

121. Have you been much employed in building harbours, and constructing nautical works?—A great deal; in Scotland particularly.

122. Were you acquainted with Leith Harbour previous to the execution of Mr. Chapman's plan?—I was.

123. Have you at any time made a survey, or taken soundings and measurements of the channel of Leith Harbour?—I have.

124. At what period?—In 1828.

125. Do you recollect at that time the depth of water upon the bar at spring tides?—There is no water upon the bar but what is produced by the little river or water of Leith.

126. What was Mr. Chapman's plan?—Mr. Chapman's plan was chiefly an extension of the pier from the end of the old stone pier, and the construction of the western breakwater; both those works have been done under the direction of the late Mr. Chapman.

127. Was Mr. Chapman's plan fully carried into effect?—Not fully;

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Mr. Chapman intended to carry out his plan 2,700 feet, if I am not mistaken; but there are only 1,500 feet of Mr. Chapman's plan done upon the eastern side.

128. Have you inspected Leith Harbour since all that was done under Mr. Chapman's plan has been executed?—I have been frequently there; but I do not say that I have minutely inspected it.

129. Do you consider yourself to be well acquainted with the harbour?—Pretty well.

130. Are you acquainted with the chart of Messrs. Dall and Leslie, of the harbour and docks at Leith; do you consider it an accurate chart?—I do; it is very minutely taken.

131. Can you discover from that chart whether the execution of Mr. Chapman's plan has deepened the water upon the bar?—From the soundings taken by me in 1828, and the soundings laid down in Dall and Leslie's chart, it appears that there is very little difference; I cannot discover a difference of above six or eight inches.

132. What do you suppose was the outlay that produced that difference?—I cannot say further than what appears in the printed reports; I have heard it said that there has been 28,000*l.* laid out, in addition to the sum laid out upon the western side.

133. What is your opinion with regard to the extension of the piers?—My opinion is, that it would produce no benefit as to increasing the depth of water, unless recourse was had to artificial means; that is to say, by dredging, and so on; that the quantity of water that comes down from the water of Leith is not sufficient of itself to effect any deepening there.

134. You are aware that a plan has been proposed by Mr. Cubitt for the alteration of the harbour of Leith?—I am.

135. Have you examined that plan?—I have.

136. Have you considered it with reference to what you know of the harbour, and also the probabilities of that plan being carried into effect with advantage?—Yes, I have.

137. What is your opinion of that plan?—From the position of the breakwater upon the eastern side, and the tides upon the coast, I should say, that, suppose that was deepened to-morrow, there is no chance of its maintaining its depth unless by the occasional aid of dredging machines.

138. Would that be a very expensive process?—A very expensive process.

139. You consider that the primary operation of dredging would only have the effect of keeping it deep for a certain time, and that it would always be subsequently necessary to go on dredging, in order to maintain the depth you had procured?—It would occasionally have to be done.

140. Can you form any estimate of what you suppose would be the average expense in a number of years of dredging, so as to keep the harbour open?—It would be a difficult matter to form an accurate estimate; I judge from experience.

141. Can you give any thing like an estimate of the average expense?—No.

142. From your knowledge of the situation of the harbour of Leith, do you consider that, under the present circumstances, or under any other circumstances of improvement that can be effected by Mr. Cubitt's plan, it is a situation that would be apt to silt up, or that tides and stormy weather might make a great alteration in any harbour constructed by artificial means?—As far as regards Mr. Cubitt's breakwater, he proposes to construct the nucleus of those breakwaters entirely of clay, with a casing of stone outside. I have constructed breakwaters in several places, both at Peterhead and Aberdeen; the whole of these being entirely of stone, both outside and inside; then to be lined up with stone, using no clay whatever; and unless Mr. Cubitt's breakwater was done with close-cut stone masonry, so as to prevent the water going in, it is as clear as noonday that every wave that went up would have the effect of passing in between the joints of rubble stones, and consequently derange the clay on which they will stand, and would very soon have the effect of making holes in the breakwater. Mr. Chapman, who constructed the other breakwaters, had them of pretty well-jointed stone, and the body entirely stone throughout on the opposite side. I am speaking of the works already erected by Mr. Chapman. I should mention, that all the breakwaters I have constructed are all stone through, and in the Plymouth breakwater it is stone throughout.

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143. In the course of your practice, did you ever see a breakwater constructed upon clay, as this is proposed?—Not in such an exposed situation as this.

144. And you believe that, in this exposed situation, it is quite impossible that it could exist for any time?—That is my opinion, if the nucleus is to be entirely clay.

145. How do you ascertain that he means that this should be three feet thick?—There is a section in one of the plans which shows this, and the dimensions in his estimate also state this.

146. Are you of opinion that the operation of sluicing from the dock gates will have the effect of preventing the silting, and of preventing the formation of a bar at the entrance?—That would have very little effect; besides the rush of water, the dock sills are only level with low water at ordinary tides, and the effect requiring to be produced here is at the depth of 10 feet under low water, and consequently it will produce no effect whatever with ordinary sluices.

147. Upon the whole, your opinion, as far as you have investigated into the nature of the plan proposed by Mr. Cubitt, is, that it is not calculated very essentially to improve the harbour of Leith?—That is my own opinion.

148. Are you acquainted with the plan of the late Mr. Rennie, and the western entrance?—Yes, I have seen the plan.

149. What was the date of that plan; was it before the introduction of steam navigation?—Long before; and I am certain that if Mr. Rennie had been living at the present day, he would not have constructed a plan like that; I think it was as far back as 1798.

150. Setting aside all these plans for the improvement of the harbour of Leith, does any mode suggest itself to your mind by which a natural channel from the east, with 10 feet low water to the docks, could be obtained at a reasonable expense?—It appears to me that the best way to obtain an entrance would be when the Trinity Harbour is formed, to form a connexion with that harbour; that would be a simple way.

151. Does any thing occur to your mind by which Leith can be made a good and sufficient harbour?—No, it is next to impossible, or, at all events, the sum that would be required to be expended in forming an entrance to Leith Harbour by the present channel would cost so much, that it would be out of the question. In the first place, the piers, and the entrance to Leith Harbour, the foundations, are by no means low enough; they would all require to be protected; the bottom of the entrance lock to the present Leith Docks is rather above low water; the walls are very little below that, consequently new walls would be required; and I apprehend it would be better to take the materials out altogether, and sweep the whole away.

152. Then if this, instead of being the property of the corporation, were the property of shareholders, as the London and West India Docks are, do you think if the shareholders were to lay out any increased sum upon the harbour of Leith, they would be likely to be remunerated by the additional trade?—No, I think they would not.

153. Knowing that docks have been constructed, and that a considerable outlay has taken place at Leith, what do you consider the best mode of making an entrance to them, so as to answer the purposes of trade and to make them most available?—I have already stated that my opinion is, and that perhaps the best way for them to connect themselves with this projected harbour of Trinity, and I would propose it in this manner, was the case my own; supposing the harbour of Trinity constructed, and vessels wished to go from Trinity to Leith, that they should only pay at Trinity the harbour dues upon the ship; but when they went into the canal to be constructed by the Leith people, they would pay shore dues upon goods and all other dues connected with that; that is to say, the people of Leith might have an outer harbour constructed, and the ship to pay no more than the harbour dues, and then the shore dues and every thing else to be paid to the Leith Harbour, provided the Leith Harbour people chose to take the advantage of constructing that canal.

154. Would not that be a complicated arrangement and difficult to carry into effect?—Not at all.

154*. What do you suppose would be the expense of constructing such a canal?—I would not at present take upon me to say, because I have not estimated it with that degree of accuracy.

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155. Do you conceive, from your knowledge of what is proposed, as a harbour at Trinity, that if it were constructed as is proposed, and the communication was made from thence to the docks at Leith, that by that means all the purposes of commerce and the interests of the public and of private individuals might be accommodated effectually?—I would be inclined to go much further than that; I think the interests of the public would be preserved, and the increase of trade in steam navigation, and larger ships daily coming into the trade would be accommodated. The ferries also would be accommodated, and the port of Leith. Trinity Harbour would afford protection to His Majesty's steamers to go in there and lie snug, and vessels of war.

156. While at the same time all small vessels that wished to come to Leith might have ingress by the present harbour?—The smaller class of vessels would come in as they do now.

157. You have heard Mr. Cubitt state the reasons upon which he formed an opinion that the proposed harbour at Trinity would not answer those objects; have you any observations to make upon that opinion?—I did not hear distinctly what Mr. Cubitt said, but I will state my own opinion. There is a breakwater proposed to be constructed securely of stone with a slope upon the outside, and upon the inside it is to be suitable for a wharf; upon the side facing the dock between the dock gates or between the tail of the lock and the interior of that harbour there is a width of 500 feet. The cheek walls are to be constructed on pillars. My great objection to all harbours constructed for the improvement of Leith is the position of them; but by placing a breakwater parallel to the run of the tide, and the cheek walls that enclosed the space, with the exception of the entrance at each end of the breakwater being placed upon pillars at the upper and lower side of the harbour, those cheek walls not only afford protection to the entrance lock, but they also from the openings below allow of the tide to flow freely through, and consequently prevent any silting up. In the centre of this harbour it is proposed to place a tide-lock, the sill of which will be 10 feet, under low water at spring tides, the width to be 60 feet, and the length 250, so as to admit much larger steam vessels than any that have been built in this country, which would admit vessels into a wet dock of the largest class, and perhaps two or three ordinary traders, if they came at the same time; this would admit vessels into a wet dock, containing an area of about 18 ½ acres, with quay berthage in the interior of about 3,540 feet, supposing vessels only to lie alongside of the quay, besides the berthage of the exterior harbour. I think I cannot do better than refer the Committee to the third page of Grainger and Miller's Report for a description of the harbour.

158. Is there any estimate of the cost of this work?—Yes.

159. Can you state to the Committee what is the amount of the estimate for the whole of the works proposed at Trinity?—The whole is 179,729*l.*

160. What is the expense of the breakwater?—£.37,812; that forms part of the 179,729*l.*

161. Do you think it can be executed for that sum?—That is my own opinion.

162. That is simply for the first cost?—The first cost.

163. If those works were constructed as you propose, do you imagine there would be any considerable annual expense in keeping them up?—There will be perhaps a little annual expense, but no considerable annual expense, further than mere little repairs, such as pointings and so on; no sea walls can do without that.

164. Have you been a great contractor for works of this description in Scotland?—I am a pretty considerable contractor for works just now.

165. Should you think you acted imprudently in taking a contract for the proposed works at the sum mentioned?—I do not think I should.

166. Do you consider the plan you have described sufficient for giving all the accommodation required for steam and other large class vessels?—I do.

167. Are you aware that there is at present any better harbour on the east coast of Great Britain than the harbour of Trinity would form?—I do not think there is; there is no harbour so deep upon the east coast of Great Britain as the harbour of Trinity would form.

168. Supposing a canal was formed between this harbour and Leith Docks, are you of opinion that it would be expedient to make any alteration in the form of those docks?—No further than necessary to make an opening through the wall of that dock at the upper end, to admit of a connexion with the canal.

169. Have

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169. Have you seen the plan of the proposed harbour at Granton?—I have.

170. What is your opinion of it?—My opinion is, that the outer harbour at Granton would soon be filled up, from its position; I have not known a single instance to the contrary, and I will refer to a fact which has been stated to me, that since this western pier was constructed, which forms a bosom very similar to what Granton is proposed to be, it is filled up nearly fourteen inches.

171. From the appearance of the adjoining shore, do you think it probable that a number of large boulder stones will have to be removed from the channel proposed by Mr. Cubitt below low-water mark?—I have scarcely seen an instance in an excavation of similar materials in which those have not been found.

172. In the event of their being found, would that be an expensive operation?—Yes, because they are very large; it is not impracticable; it is only matter of pounds, shillings and pence. Off Newhaven Harbour, there is the East Bush, which is a very large one; I measured it in 1828, and found it to be one hundred feet one way by, fifty feet another, and only three feet two inches of water over it.

173. Suppose the outer coating to the nucleus of clay in the proposed work of Mr. Cubitt was not formed of stones merely laid, but suppose they were paved in, would that alter your opinion of the solidity of that work?—I understand, from all I can collect in Mr. Cubitt's report, that it is rubble-stone for the outside facing, and the price indicates that, for he only says 4*s.* a ton; that price would not produce any thing more than rubble-stone tumbled in.

174. Will not any coating that will secure the nucleus of the clay add considerably to the expense of the work?—My opinion is, that the nucleus of clay would not answer the purpose, unless it was done with close-jointed masonry on the outside, but that it would be necessary to fill the interior of the breakwater altogether with stone in place of clay.

175. Does it appear to you that Mr. Cubitt's estimate of 1*s.* per yard for excavating the channel is sufficient?—I do not think it is. He has no where stated where the stuff is to be laid, and I do not know where it can be laid; there is no ground to lay it upon adjoining; it cannot be laid upon the outside of either of the breakwaters; and consequently, under such circumstances, I think that eighteen-pence a yard is as small a price as could be laid upon that excavation.

176. Have you ever seen, in the course of your experience, any breakwater with a clay nucleus and dry rubble-stone casing, in a situation so much exposed as that?—No; I have already stated that I have not.

Jovis, 21° die Maii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Mr. *John Gibb*, called in; and further Examined.

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177. IN your former examination you stated your belief that the clay nucleus proposed by Mr. Cubitt to form the principal part of his great breakwater would not resist the violence of the sea during stormy weather; if the nucleus of this breakwater, instead of being of clay, were packed with stone throughout, is it your opinion that that would resist the violence of the sea?—It is.

178. What would be the difference of expense between the two?—(*See Estimate given in, amounting to* 74,247*l.*)—I have made a comparative estimate here for my own satisfaction, and in doing so I have taken the quantities as given in Mr. Cubitt's report and estimate, filling the breakwater with stone instead of clay. I have compared these with the prices stated in the estimate for the breakwater at Trinity Harbour, and I find there is a very considerable difference. Those breakwaters, according to my view of the question, to complete them, would cost 109,034*l.*

179. Are the Committee to understand that the interior is to be of rubble-stone work, or built?—The interior is to be rubble-stone work, and the outer casing is to be faced with hammer-block stone, and the slopes the same.

180. Do you consider it would be necessary in constructing the outer end of these breakwaters to form them of a superior kind of masonry, namely, with dressed stone, so that vessels entering between them would not be subject to damage by striking against the rubble-stones if they were tumbled in promiscuously in the manner proposed by Mr. Cubitt?—I am decidedly of that opinion,

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for two reasons, on account of the risk of damaging vessels in falling against the sides of that pier, and if so, it is obvious that falling against a parcel of rough stones must produce corners which would be very injurious to vessels. In the breakwaters I have constructed we always made the head of a superior character of masonry, both because it is more exposed generally, and also for the purpose of avoiding the inconvenience I now state.

181. Are you of opinion that it would be impossible so to construct these breakwaters of rubble work, not of built masonry, as to make it certain that the stones would not shift, and that a danger of the channel being altered would thereby be created?—I am, with regard to the sides of it, but not with regard to the head; but in saying that I am with regard to the sides of it, it will then require an increased slope on the sides, in order to give security for its standing, and that would of course require an increased quantity of material, and more expense.

182. Taking all those circumstances into consideration, will you state what would be the difference of the sum necessary to expend between the proposed breakwater of Mr. Cubitt, and what you consider would be an effectual and substantial breakwater composed of stone?—I have already stated that taking the estimate I have made upon the quantities given by Mr. Cubitt, at the same prices which I propose for the breakwater at Trinity Harbour, the breakwater according to Mr. Cubitt's plan would cost 109,034*l.* It is to be observed one of them is 2,300, and the other is 1,200.

183. Then the Committee are to understand that the estimate you have now made of what the expense would be is founded upon a similar statement proposed for Trinity Harbour?—For the breakwater of Trinity Harbour.

[*The following Estimate was delivered in:*]

COMPARATIVE STATEMENT, showing the Difference of Expense of the *Breakwaters* proposed by Mr. *Cubitt*, in his Plan for the Improvement of *Leith Harbour, as estimated by him*, and as estimated *by me*; taking the *Quantities* given by Mr. *Cubitt*, and the *Prices* stated in the Estimate of the *Breakwater* proposed at *Trinity Harbour*.

1st. Expense as estimated by Mr. *Cubitt*:

	£.
Amount of Estimate	40,636
Add Contingencies, 10 per cent.	4,063
TOTAL as estimated by Mr. Cubitt	£. 44,699

2d. Expense as estimated by *Me:*

	Feet.	Cub. Feet.	Cub. Yards.	£.	s.	d.
Rubble basis in first length of	2,000 × 31 × 7 =	434,000				
Ditto in outer length of	1,200 × 58 × 13 =	904,800				
		1,338,800 =	49,585, at 4/6	11,156	12	6
Facing slopes and top in first length of	2,000 × 100 × 3 =	600,000				
Ditto in outer length of	1,200 × 100 × =	360,000				
		960,000 =	35,555, at 14/7½	25,999	11	10½
Stone packing in nucleus in place of clay, in first length of	2,000 × 1,392 =	2,784,000				
Ditto in outer length of	1,200 × 1,712 =	2,054,400				
		4,838,400 =	179,200, at 3/6	31,360	–	–

WEST BREAKWATER:

	Cub. Yards.				
Ruble basis, length	1,200 × 58 × 13 = 904,800 =	33,511, at 4/6	7,539	19	6
Facing slopes and top	1,200 × 100 × 3 = 3,360,000 =	13,333, at 14/7½	9,749	15	1½
Stone packing in place of clay nucleus	1,200 × 1,712 area 2,054,400 =	76,088, at 3/6	13,315	8	–
			99,121	7	–
Contingencies 20 per cent.			£. 19,824	13	–
TOTAL as estimated by Me				£.	118,946
Difference, being excess over Mr. Cubitt's Estimate of Breakwater				£.	74,247

Note.—The above prepared by order of the Select Committee, 21 May 1835.

Jn° Gibb.

Lieut. *Allan George Field*, called in; and Examined.

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184. YOU are an officer in the Royal Navy?—I am.

185. Have you been long acquainted with Leith, and the navigation of the Frith of Forth?—I have.

186. How long?—Upwards of 20 years, during which time I was first lieutenant of a large frigate 14 or 15 months, and I commanded a revenue cruizer three years upon the station, and since that time I have been connected with a large brewery at Leith.

187. You consider yourself perfectly acquainted with the Frith of Forth?—I do.

188. Are you acquainted with Leith Harbour?—I am.

189. What is your opinion of it?—I think, under all the circumstances of it, considering the immense population in the neighbourhood, and many of them in mercantile pursuits, that it is the worst adapted in Scotland for any thing like a harbour.

190. Do you mean with regard to its present state?—As to its present state of trade, and prospectively, and as a harbour of itself; bad in every point of view.

191. What is your opinion as to its capabilities of being made a good and sufficient harbour?—It might be presumption in me to state that, except from what my own local knowledge may give; but when I consider that for 150 years it has engaged the attention of the first men of talent, and that half a million of money has been expended upon the works already, and that nothing has yet been made available in any way, because it has not yet gained one inch of water, except at the mouth of the harbour; but I think it has not yet been made available for its present or prospective trade in any way, nor can be, I think.

192. Then, the opinion you have given does not rest only upon the fruitless efforts that have been made to improve the harbour of Leith, but, from your local knowledge, you consider that it is so situated, that there are circumstances attending upon the localities that prevent the possibility of making it a good harbour?—I do; I think the difficulties in it are of such a gigantic magnitude, that there is no sum of money that could by possibility make it worth while to carry any improvement into execution.

193. Are the difficulties to which you refer applicable peculiarly to the situation of Leith, or would they apply in an equal degree to any other point upon the Frith of Forth?—Peculiarly to Leith, being situated in the centre of a most extensive sand-bank, which runs out a mile from the mouth of the little stream which runs down it.

194. Have you seen any of the proposed plans recently brought forward for its improvement?—I have seen a great number, and there are new ones every day; I never met a person in Edinburgh or Leith that had not a plan of his own.

195. Have you seen the plan proposed by Mr. Cubitt?—Yes, I have; I met Mr. Cubitt, by appointment, on the chain-pier at Trinity, where I had an opportunity of showing him, one very fine day, the situation of Leith most particularly. We were standing in a little outhouse discussing the nature of Trinity Harbour and the chain-pier, and I called Mr. Cubitt out, and begged him to take a look; there were at the time two or three large ships lying in the roads discharging part of their cargoes of timber; there were the Fife ferry-boats coming over to the Newhaven Pier, landing their passengers in small boats for want of water; and when Mr. Cubitt was standing there, there were four steam-boats, at the end of the pier we were then on, landing 400 or 500 passengers before his face, alongside the pier, with perfect convenience; and that chain-pier is situated in the centre of the harbour of Trinity.

196. Did what was exhibited at that time appear to you sufficient to point out to Mr. Cubitt the bad state of the harbour, as it then was?—I think it would point it out to any body; because it cannot accommodate the present trade-ships that come to Leith, drawing 14 or 15 feet water. The merchants are exposed to heavy expense in lightening those vessels in the Roads by lighters: then they have to pay heavy dock and shore dues on entering the harbour; and with respect to the present trade by steam, every other week the steam boats belonging to the Leith, Glasgow and Edinburgh Shipping Company are obliged

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to load and unload in the Roads; and it is only during the spring tides, once a fortnight, that they are able to go in and out at pleasure, and then only at high water; it is a tidal harbour, and is incapable of being made any other. Then again we have the London steam boats, that never attempt to go in there, for there is no accommodation for them if they did; and a great detriment is experienced by those Leith steam boats that do go into the harbour. If a short vessel gets into the mud in the harbour she makes a bed for herself, if she lies there three or four days, which when she goes to haul off from the quay, causes an obstacle to her getting out; and then, if a steam boat comes in and lies in the centre of that hole, with the weight of the engine upon it, supported at each extremity, she is likely to break her back; therefore it must be, of course, a matter of anxiety and loss to the owners. But the London boats, when they come, are obliged, whatever weather it is, to land their passengers and goods in small boats; and I dare say the managers would state that it is attended with considerable loss sometimes. I know there are cases of loss of luggage: I think a gentleman lost his carriage there three years ago. Then, the very vessels themselves are risked, because they are lying in the Frith exposed to all the weather, winter and summer; and every body knows that it is a very dangerous place. I have known an instance of a steam boat driving from her anchorage off the stone pier up towards Granton, and parting from her cable; and it was with the greatest difficulty, after getting up her steam to the utmost speed, that she could keep from going on shore. Now if there was a harbour for the accommodation of steam boats, there is no question that the steam trade would increase there very largely; and I dare say one steam company do not wish to see it; they would be glad to see the London steam boats taken out of the Frith altogether.

197. Taking into consideration these local and other disadvantages you have enumerated in your opinion of the present harbour, what is your opinion with regard to Mr. Cubitt's plan for the purpose of putting it in a better situation?—I do not think it is competent to improve the harbour. I think, if anybody will consider, that these breakwaters at the outer end must be fully 30 feet perpendicular, and that they are filled up with a body of clay, where the water can run through like a sieve, and which will soon take all the clay deposited as its nucleus back again into the channel from whence it was taken. There does not seem to be any security for the entrance channel that is dredged out. Everybody knows what the effect is upon the sides of an embankment exposed to a boiling sea, unless it is secured by some masonry at its sides. They will also be washed into the channel. But there is a nautical objection to it; it presents very similar objections to the Leith Harbour, in point of getting in or out, because with the wind from the southward, there is no vessel can enter without being towed or warped in; but the channel is pretty long for that. Then, again, she could not come out with a northerly wind without being towed out; and I do believe that in northerly winds such a sea will be raised in the mouth of that channel that no vessel could get out. And I am further of opinion, that these dry rubble breakwaters would be thrown into their respective channels also with the first heavy gale of wind that came from the northward and eastward. Then here is foul ground also close to the entrance of Mr. Cubitt's harbour, which, if a vessel casts to the westward instead of the eastward, she would go upon the rocks: there is no lighthouse provided by the Estimates. Then, as for its accommodating any ships of His Majesty's navy, I would be very sorry to be the captain of a ship to take her in there.

198. Supposing that the breakwater proposed by Mr. Cubitt could be constructed, and that what he proposes with regard to the improvement of the harbour could, by the construction of that breakwater, be obtained, is it your opinion, that taking into calculation the state of the weather during the winter months, and the stormy character of the Frith, that an erection such as he proposes, and situated where he proposes, would be permanent?—I do not think it would.

199. Are you acquainted with the Admiralty property at Leith?—Yes, I am.

200. Do you consider it of much value to that department?—I had opportunities of knowing about the purchase of that land; my father was secretary to the naval commander-in-chief on the station, and I know that it has cost 18,000*l.*; I know also the opinion of the commander-in-chief at that time, which

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which was, that it never would answer the purpose for which it was bought; it cost 18,000*l.*, and I have been myself considering whether I should not purchase it; I know that I could get it for 6,000*l.*; I speak of the land at Annfield. With the permission of the Committee, I will state another objection to Mr. Cubitt's plan. There is a little village called Newhaven, which contains a most respectable class of men, for they form the principal body of the Frith and Forth pilots and fishermen. Mr. Cubitt's plan would go to exclude those men from their occupations; they have by long usage, whether by prescription or charter, (I believe by charter) a right to a certain shore there for their boats, and if Mr. Cubitt's plan was carried into operation that would be effectually destroyed. Now it would be a matter of consideration for the Committee, how far that might not injure the safety of vessels coming up the Forth. It is very well known that a ship is often up as far as Leith Roads wanting a pilot. If those men were excluded from launching their boats to go out and afford assistance, inevitable loss of life and property would in all probability take place. There are 220 of them; I think they muster about 1,100 souls in their families, and they have about 130 boats.

201. Why do you think that is necessary?—Because Mr. Cubitt's plan extends to the stone pier, to the east of which is the beach which they occupy; they cannot have any to the westward, because a high sea-wall runs up immediately on the west side; the tide at high water comes up eight or ten feet against this wall, consequently they could not beach their boats; on the east side they could not have their boats.

202. Between their boats and the chain pier, is there any situation in which those boats could be beached?—None.

203. You state that the Admiralty have some property for which 18,000*l.* have been given, that is the property at Newhaven; has not the Admiralty besides that some docks at Leith?—I believe the town council of Edinburgh and the Government have made a bargain for a piece of the westermost wet dock, but I defy them to get any ship into that which draws above 12 feet water.

204. Has that ever been used for naval purposes?—In the first place, there is no dry dock. They might bring a ship of 12 or 13 feet in there, but that would be a vessel of no size, merely a brig sloop.

205. Therefore you consider these docks totally inapplicable to the purposes of His Majesty's navy?—Most undoubtedly.

206. Is it not a fact that it is the smaller class of vessels that are usually employed in the Frith of Forth?—Not always; during the War, and even since the Peace, I have seen line-of-battle ships there.

207. Is it your opinion that an 18 gun brig could with safety go in there?—No, she could not with safety, in her common sailing trim.

208. Could a 10 gun brig?—Yes.

209. You have stated that you consider yourself a judge of that part of the coast of the Frith of Forth; where, in your opinion, could the best harbour be constructed for the purposes of giving security to the trade of the city of Edinburgh?—A public body decided that question, better than probably I could, for they selected the best spot, and put a chain pier at Trinity.

210. What public body do you mean?—A joint stock company.

211. Is your own opinion in conformity with that?—Decidedly; because it would not only afford the necessary protection to all classes of merchant vessels and the steam trade which now cannot be accommodated, but it would afford shelter and security to men of war, which could go out and into the harbour in almost any state of the wind, because the breakwater running east and west, they could go out whichever way the wind prevailed, either on one side or the other. Then again, the anchorage of Leith Roads lies immediately off it, and vessels cannot leave that anchorage with safety, because they are established by nautical usage; the marks are laid down nautically for this anchorage, and to go east or west of that to any extent, would endanger the ships that anchor there.

212. Are you well acquainted with the soundings upon that part of the coast?—I am.

213. Where do you consider is the greatest depth which can be procured for constructing a harbour?—The greatest depth of water, I think, is off Trinity; taking it from Trinity directly off.

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214. And you think there is a sufficient depth of water off the chain pier at Trinity, for the construction of a harbour which would accommodate the large class merchant vessels and vessels of His Majesty's navy?—I do.

215. What is the difference in the depth of water at Trinity, as compared with the entrance proposed by Mr. Cubitt?—Mr. Cubitt, in his report, says that his pier ends at 12 feet, but his plan only shows it nine feet, and we propose 11 feet 1 inch at Trinity.

216. When you say "We," whom do you mean?—The Trinity Harbour Company.

217. You are a subscriber to Trinity Harbour?—Yes.

218. To what extent?—Ten thousand pounds.

219. Supposing an entrance of sufficient depth could be obtained at Trinity, would there be any impossibility in connecting that entrance with that already established at Leith, and with the various other buildings connected with capital already expended?—It is quite possible to do so, but then you exclude this useful class of men from the village of Newhaven.

220. If accommodation could be obtained for beaching the boats of the Newhaven fishermen, you see no other objection to an entrance from the Trinity Harbour communicating with the present docks at Leith?—Certainly not.

221. Then are the Committee to understand that your objection to Mr. Cubitt's plan is one that applies rather to the details of the construction of his plan, than an objection to the principle of improving the docks at Leith by an entrance from the westward?—No; my objection is to Mr. Cubitt's plan as a plan, and in all its details.

222. It is not your opinion that it is impossible to have a deep water entrance to the present docks at Leith from the westward?—It is perfectly possible, if money is laid out to that extent, but it would be an enormous sum.

223. And in a nautical point of view you see no objection?—In a nautical point of view, I see none beyond what I have already stated.

224. If such an entrance were obtained, would it then be possible for any men of war to avail themselves of that part of the basin which is the property of the Admiralty?—No, I do not think it would, because the dock is not excavated to an extent to admit them; in all probability they must lower the foundation of the dock walls.

225. Are you aware of the depth of water in the Western Basin?—In ordinary tides it is about twelve to thirteen feet.

226. Provided such an entrance were to be made at Trinity, and a communication was made from Trinity to the existing works at Leith, it would run in front of the ground now belonging to the Admiralty near Newhaven?—It would.

227. Can you state whether there is any accumulation of sand behind the extended pier which has been lately excavated at Leith?—There was more than there is just now, by the western pier, which has been lately built, but the sand has gone out as the harbour has been extended.

228. Do you know if there is any accumulation of sand at the stone pier, or of other matter?—I know there has been such an accumulation; I know that it had six feet water at low-water spring-tides when it was built, and that now there is scarcely an inch.

229. From your experience, have you no apprehension that any structure thrown out near the site of Newhaven Pier, would create an additional accumulation of sand, so as to be very detrimental to the passage of vessels?—If it ran far enough out, it would not; it would depend upon how that harbour was formed. My opinion is, that if any pier was thrown out clean into the stream, and made of such a construction that it may be made to sweep or clean itself, it may be kept clear. On the shore line the sand may accumulate on both sides, but that will not injure the inclosed dock.

230. Do you consider that a harbour constructed in the manner in which it is proposed to construct Trinity Harbour would not be subject to that accumulation?—I do not think it would; that is to say, where shipping would enter. I dare say that a little accumulation of silt may come on either side towards the shore, but none to prevent the navigation of shipping into its mouth.

231. Do you consider that the passage of the tide through so narrow an entrance as that contained between the proposed breakwater and the cheek walls would

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would be sufficient to keep that passage clear?—I do decidedly, because those cheek walls are placed on inverted arches, and the narrowness from the pier heads to the breakwater would keep it clear, and I can cite an instance of that. In Cromarty Harbour, where they had a narrow breakwater at the entrance, since it was originally built, it has acquired in depth seven or eight feet.

232. Are you acquainted with the proposed Granton Harbour?—I am acquainted with the shore at Granton; I have not seen the plan to examine it.

233. In a nautical point of view, what is your opinion of Granton as a site for a harbour?—I think it is quite possible to make a harbour at Granton; but when I look at the position of it, I see it exposed to the north-east winds; I think it liable to objections; I can put an instance: suppose a heavy ship that came up to Granton Harbour in thick weather, chartered to Granton, and had not got a pilot, and came to anchor off Granton, the probability is that she would be lost before morning, because if she anchored westward of Leith Roads, he would run his ship into danger.

234. Supposing a ship to come into the Frith of Forth in thick weather, would not the most natural thing be, to anchor in the Leith Roads till the weather was such as to allow them to go to the harbour?—That is possible; but we all know what masters of ships do when they are chartered to a port; they always drop anchor as near to it as they can.

235. You have stated that you consider Granton Harbour would be very much exposed; is it your opinion that the Island of Inchkeith would afford shelter to a harbour constructed at Trinity?—Yes.

236. What distance is that?—About three miles.

237. What is the elevation of Inchkeith?—I suppose, judging from my eye, the elevation of Inchkeith may be 400 feet.

238. What do you calculate the length of it to be?—From point to point, about a mile and a half.

239. What is the distance between Granton and Trinity Harbour?—About a mile.

240. Inchkeith lying three miles off, could there be any shelter at Trinity from Inchkeith that would not be applicable to Granton?—Inchkeith lying north and south, would break the sea in north-east winds from Trinity much more than it would at Granton. Granton is directly open to the sea, with the wind from the northward and eastward, the north end of the Island of Inchkeith not covering it.

241. Would you, in commanding a vessel, hesitate to run for Granton, while you would not hesitate to run for Trinity?—I would certainly run for Trinity in preference, and the danger would be much less, because off Trinity is the natural roadstead of Leith, and it is not so off Granton.

242. You have stated that the master of a vessel running for Granton in thick weather, and being obliged to come to anchor, would be in danger of being lost before morning, in the event of the wind running in that direction; would not nearly the same risk accrue in coming to an anchor off Trinity?—No, it would not.

243. If the wind was a point more to the east, would not it operate the other way?—No, they would be both sheltered equally, in all probability, by veering a point or two to the eastward.

244. You have been asked as to the elevation of Inchkeith; when you spoke of the shelter afforded by Inchkeith, did you mean more with reference to the sea than to the effect of the wind?—I did; and with respect to the anchorage in Leith Roads it is more important still, for there it is more sheltered from wind and sea; but if they go to the westward of it, they would not have either.

245. Do you consider that Inchkeith completely protects both from wind and sea in the Roads?—In the Roads, to a considerable extent; men of war completely.

246. Are there any sands situated in the vicinity of Trinity or Granton?—There are none at Trinity, but there is the Drum sand at Granton, which is situated just to the westward of it.

247. Is it so situated as to affect materially the safety of vessels running for the harbour at Granton?—If they overrun their port (which is often done), it is a great objection.

248. Is the Drum sand so situated as that it might, under circumstances of

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stormy weather, shift so as to silt up or affect any harbour at Granton?—It forms an obstacle to ships anchoring off Granton; and if they overshot their port, it must be attended with considerable risk, for at low water there is only eight feet water on the south side of the Mickry Rocks. They would not be able to go up to the Hope.

249. What is the depth of water at the entrance of the harbour proposed to be constructed at Granton, compared with the depth of Trinity?—I believe they are much about the same; I think they say that they have even a little more water, but I have not seen the plans.

250. You have said that you have seen a great number of plans for improving the harbour of Leith; have you seen any other plans for improving the entrance of the harbour from the westward besides Mr. Cubitt's?—I have; I hold one in my hand, which has three plans upon it; that is the late Mr. Rennie's plan. Mr. Cubitt's plan, and Mr. Anderson's plan is, I believe, borrowed generally from Sir John Rennie.

251. What is your opinion of practically executing Sir John Rennie's plan, or that plan as amended by Mr. Anderson?—I think if there is money enough it may be executed, but it is still liable to some nautical objections.

252. If such a plan were executed, would it communicate with the Leith Docks, and would all the buildings, and warehouses, and wharfs there be made available for the general purposes of the trade?—It would, if its entrance is where Trinity is proposed.

253. Would it not be of advantage that the harbour should communicate directly with those basins, upon which so much money has been expended, and where there are large warehouses already erected?—With respect to the warehouses, they may be matter of consideration; but I imagine that if that canal is built and made secure by solid masonry, and properly put up, very few ships would take the trouble of going into the basin if there is a quay made all along that shore.

254. Would not such a plan be generally a greater advantage to the trade than constructing a separate harbour upon a smaller scale at Trinity?—I do not think it would, because in this proposed outer harbour there is no estimate made for the expense of clearing it out to accommodate it for the steam trade.

255. Considering such a plan in a nautical point of view, would not that plan be preferable?—Considering it nautically, I must come to its entrance, and then I do not think it would.

256. If a breakwater, running east and west, was placed at the entrance of that harbour, instead of an extension of the eastern pier, would not that answer the same purpose as the proposed breakwater at Trinity?—There is no question, if the expense is gone into, it may be carried into execution; for if we can build Trinity, they can build this of course; they put the foundation of their western breakwater just upon the foundation of our eastern pier.

257. In bad weather, would not a vessel rather desire to keep the Frith of Forth than to enter any harbour that could be constructed?—Most decidedly, if she had a pilot on board that could get her up to the Hope she would do so; but that applies only to sailing vessels, not to steam boats, of course.

258. In a heavy swell, would you consider it safe to take a vessel into either Trinity Harbour or Mr. Anderson's harbour?—Mr. Anderson's having only one entrance would make a difference; Trinity Harbour has two; there would always be a lee side.

259. In a heavy gale from the north-north-west?—She would be able to anchor under the lee of the western pier, or run up to the Hope, as circumstances might decide.

260. Is this proposed outer harbour of Mr. Anderson's a tidal harbour?—Quite; it is dry every tide; there is no estimate made for the expense even of clearing it out; nor would it remain clear if it was cleared out.

261. Could vessels of war get into it?—Similar vessels to those that would get into Leith Harbour.

262. Would there be any difficulty in attaching such an entrance as is proposed at Trinity to that portion of Mr. Anderson's plan that communicates with Leith?—No, except upon the ground of expense.

263. Suppose a similar entrance was formed, do you think it would be as effectual for all purposes as the other?—Yes, if you put the canal all the way from Trinity Harbour up to the western pier of the dock.

264. Suppose

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264. Suppose this plan to be carried into execution, do you think it would be necessary to construct a breakwater?—Undoubtedly.

265. And without the construction of that breakwater, you consider that the plan, as it at present appears, would be ineffectual?—Quite so.

266. Do you think that a vessel under sail, in a heavy swell from the eastward, could enter Trinity Harbour with safety?—I do.

267. And bring up in the small space inside?—Yes, with a clever seaman.

268. It would be attended with some degree of risk?—Nothing more than what is very common to nautical men.

269. Would a steam vessel come in without warping?—Decidedly.

270. What is your opinion as to the silting up of the outer harbour, on Mr. Anderson's plan?—He has put inverted arches apparently to let it in, and keep it there, but he has made no egress for it.

Mr. *John Miller*, called in; and Examined.

Mr. *John Miller*

271. YOU are a civil engineer?—Yes.

272. Are you acquainted with the projected plan of Trinity Harbour, and with the harbour and docks of Leith?—Yes.

273. Are you the engineer of the Trinity Harbour?—I am one of the firm of Granger & Miller.

274. Are you acquainted with Leith Harbour?—Yes, I have been acquainted with it for several years, from residing in the neighbourhood.

275. As an engineer, do you consider you are a competent judge as to the harbour of Leith, as it is at present?—Generally speaking.

276. Have you ever been employed in the construction of other harbours or docks?—No, I have not; I have been engaged about other harbours; last year I was engaged with one in Wigtonshire, at Port Logan.

277. In what manner were you engaged?—Inspecting it, to give evidence before a court as to the plan, and its execution, and all the bearings upon the plan.

278. Have you ever, as an engineer, executed any works connected with harbours?—No, I have not.

279. Are you acquainted with the plans that have been carried into effect for the purpose of improving the harbour of Leith?—Generally I am.

280. Are you acquainted with the plan of Mr. Chapman?—Yes, I have seen it, and seen the works.

281. Have you seen the plan?—I have seen the plan which was published along with Mr. Chapman's report.

282. Had you those plans referred to you for the purpose of estimating them?—No.

283. Are you aware whether or not Mr. Chapman's plan has been executed to its full extent?—I understand it has not; I believe the full extent was to run out a wooden pier to the martello tower, being a distance of about 2,500 feet.

284. Have you seen the alterations that have taken place in consequence of that plan?—I have.

285. Are you of opinion that what was intended by that plan has been fully executed?—The plan itself has not been fully executed, inasmuch as it was proposed to carry the wooden pier to the martello tower, about 2,500 feet, and from that to run out a weir beyond the martello tower. Now, in executing that, they have only been carried out about 1,500 feet, and the weir only carried to the martello tower. The benefit to be derived from the execution of that plan was to afford shelter to Leith Harbour, and principally to deepen the water in the channel; that is what Mr. Chapman states himself in his report.

286. Consequently Mr. Chapman's plan has not been executed to the full extent, but has been partially carried into effect?—Yes.

287. That being the case, have you since those alterations have taken place examined Leith Harbour, and are you of opinion that the depth of water has been increased in consequence of what was done under Mr. Chapman's plan?—Since the execution of the plan, I have examined it repeatedly, and at very favourable periods at the low water of spring tides. There has been perhaps an additional depth of water got, but that has been by means of dredging; that is as far

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as the channel is concerned. He has formed an outer harbour, but so far from that keeping its depth, it is silting up every day. I observed a sand bank forming at the end of the pier, and it will go on silting every day, unless it is kept out by means of dredging, and the channel is kept deep by the dredging machine; but from what I have been able to see, I do not think there has been any additional depth obtained even by dredging; but it is clear that if they go on dredging to a sufficient extent, they may get any depth at the place, and that in proportion to the number of machines they employ and the expense incurred.

288. At the end of which pier has the accumulation taken place?—The western pier or breakwater; there are two piers; there is the eastern pier, which is called the Pier Proper, and there is the western pier, which is called the Breakwater. It was expected that this pier would have the effect of keeping a clear channel, but it has not done that.

289. Then you consider that the outer harbour is now silting up?—It is silting up.

290. Upon the Plan there is a sand bank to the westward of the entrance to Leith Harbour; has that sand bank increased since the extension of the pier?—I do not know particularly as to this sand bank, because it is only at very low water that it is bare; at low water there is a line of breakers extending from the Newhaven Pier to the martello tower. I think there is no doubt but that this bank is increasing every day.

291. You are speaking now of the back of the western pier, that is to say, to the westward of the entrance?—Yes.

292. What has your observation been as to the eastward of the pier?—I cannot say whether there has been an accumulation there or not.

293. But you have no doubt as to the accumulation upon the westward?—Not the least; at the extremity of the western breakwater there is an accumulation of sharp sand, and in the interior of the harbour there is an accumulation of mud.

294. Could any means be devised of damming up the water somewhere in the course of the stream, so as to have a great rush of water from it to clear that entrance?—I should think not, because wherever it meets the tide there must be still water and a counteracting current, and there a bar will be formed.

295. Then you think the effect of it would only be to make the bar further out?—Yes, just according to the increased strength of the current, so would the bar be placed.

296. Would not there be less chance of a bar at a greater distance beyond the martello tower, from the sea there coming in a rapid stream either up or down the Forth?—The bar would be placed wherever it met the opposite current.

297. If it was run so much further out as to meet the tide, would it not accumulate in less quantity?—No, I do not think it would, because the water washes down the river, and the water of the ebb tide would be standing near the martello tower. I have never been able to see any good done by sluicing there; the current of the ebb tide runs eastward across the mouth of the harbour, and wherever the current coming down met the opposite current there would be still water.

298. Do you consider that, by draining or otherwise, it is practicable to sluice in such a way as to clear the eastern entrance?—No.

299. Can you state, from your own knowledge, what additional number of feet of deep water have been acquired in the channel since the extension of the Pier of Leith?—I did not take any measurements myself previous to Mr. Chapman's plan being executed. I have seen it repeatedly since, but not before.

300. Do you believe that there has or has not been any additional depth of water since?—I believe there has, and I believe there may be a great deal more, but that is obtained by the dredging machine.

301. Can you state how many feet have been acquired since the extension of the pier?—If I speak from my own knowledge, I cannot say what depth may have been acquired, but if I speak from information received from documents, I say there has been none, because in 1710 I find the depth varying from 15 to 30 feet, and in 1831 I find it the same.

302. Has there been an additional depth acquired since the extension of the pier?—I cannot say from my own knowledge; from report there has been something, but it must be very little.

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303. Do you believe that it is less than three feet?—Yes, I do.

304. Do you know whether it has been acquired by dredging or scouring?—I have stated that my opinion is, that if there is any depth acquired there at all, it must be by dredging.

305. Might it not be further increased by the dredging machine?—I dare say it might.

306. To what extent?—To the extent of the number of machines that you put on; you might dredge to the whole extent of the Frith of Forth.

307. Do you know how many dredging machines are at present used?—One; I believe there is a good deal of hand dredging.

308. Are you acquainted with the chart of Dall and Leslie?—Yes.

309. Do you consider it an accurate chart?—It is a very accurate chart in the parts I have verified.

310. Is it your opinion that, in the event of this dredging being carried to a greater extent, that it would have the effect of silting up the outer harbour, so that the outer harbour would decrease in depth, as the inner harbour was increased by artificial means?—No, I do not think it would.

311. To what extent do you suppose the deepening of the present channel could be carried, without interfering with the foundation of the present pier?—That I cannot say, because I do not know how deep the piers are; but from Mr. Chapman's plan his piers do not seem to be very deep.

312. You have stated that you saw no difficulty in making the channel considerably deeper by means of dredging?—If expense is kept out of the question; but suppose it was deepened to the extent of several feet, a single night's wind from the north-west direction would block it all up. The ebb tide comes running down from the west. The pier constructed according to Mr. Chapman's plan, is pointing to the north-west, and that forms an arm to intercept all the mud and stuff that is carried down by the ebb tide, and it lays it in the mouth of the harbour.

313. Does that observation of yours apply to the present pier at Leith only, or to any other pier that may be erected upon that coast?—If it is made in the same form that Mr. Chapman's pier is.

314. Then that of course applies both to the plan proposed by Mr. Cubitt and the plan proposed by Mr. Anderson?—Yes, Mr. Anderson's plan is nearly in the same form as the outer harbour of Leith.

315. Has it occurred to you that there is any way of avoiding that effect?—Yes, I have endeavoured to avoid it in the plan of Trinity Harbour.

316. Will you describe that?—I may state that in the first plan of Trinity Harbour, it was drawn nearly in the same form that Mr. Stephenson's plan of Granton is drawn; that was in 1834, with two docks running along the coast, and the two piers running out, enclosing a surface of water; but after that was pencilled out I was quite satisfied that it would not answer the purpose, and drew a plan upon the same principle as that proposed for Trinity; but I may state, that the plan for Trinity proposed about the beginning of 1834, was one of a much greater extent than that which is now proposed, inasmuch as the docks were very considerably larger, and the outer harbour considerably smaller; and when the plans came to be made out again, and a renewed application to be made to Parliament, we thought it better, as perhaps the trade did not require such accommodation, to reduce the extent of the docks and to increase the extent of the outer harbour.

317. Will these two piers that you propose to make for the purpose of forming the harbour of Trinity, have the same effect of silting up, as the pier of Leith has had?—No, they give no interruption, at least a very slight interruption to the run of the ebb tide. The outer harbour lies parallel to the run of the ebb tide. There is a breakwater on the north side, there is the dock on the south side, and the two ends, in order to produce still water in the outer harbour, are secured by means of two check piers. But then again, as a remedy against silting, these piers are put upon arches, so that the tide has a clear run through them; and it will have the effect of deepening the harbour rather than silting it up. That this will be the effect I have no doubt, because at the end of the chain pier, when it was executed, I understand the water was five feet four; now it is six feet eight. This increased depth has been caused by the slight interruption given to the current by the head of the pier, and thereby

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thereby causing an increased current round the head, and so deepening the water.

318. How has that fact been ascertained?—By the information that I got of the state of the ground previous to the chain pier being executed, and measurements which I have made since its execution. The increase is about sixteen inches.

319. If a similar breakwater was to be placed in front of Mr. Anderson's plan, would it have the same effect as that placed in the front of the Trinity Harbour?—If Mr. Anderson's proposed outer harbour was made into a dock perhaps it would, not otherwise. The plan adopted in Trinity Harbour is to carry the works out so as to reach the depth of water which it may be thought advisable to adopt at low water, and which in this case was thought best to be ten feet water; then we make use of the works in going out to that ten feet, by making a dock of it, and at the end of the dock the harbour is constructed; and a harbour formed upon any other principle upon that coast I conceive would silt up, as has been proved in all cases.

320. Would a breakwater, placed in front of Mr. Anderson's plan, in your opinion, probably prevent silting up in the outer harbour?—No, only silting up in the entrance. The outer harbour would silt up the same as if there was no breakwater there.

321. If a dock was introduced into Mr. Anderson's plan, then that silting up would not take place?—No.

322. And then from that a communication could be made to the present works at Leith?—Yes.

323. Would not Mr. Anderson's work, if executed on arches, have the effect of preventing the silting up?—Yes. But then, again, Mr. Anderson proposes dredging; now, there must be still water in the trough formed by the dredging. Now in the Trinity plan the current exists from the top to the bottom, and there is no place where still water can lie.

324. You have stated that the water has deepened at the end of the chain pier; is it possible that that can be in consequence of any run on the same principle as the arches?—At the end of the pier there is an obstruction given to part of the water by the piles being driven; and the pier heads slightly obstructing the current there, increases its force in running past the end of the pier.

325. And you speak of that as it is analogous to the running through arches?—Yes.

326. Have you ever seen in practice the tide running through arches in that sort of way?—I take the one principle as being the same as the other, only put into execution in a different way.

327. For what purpose do you suppose these arches are included in Mr. Anderson's plan?—He states that they were put there to prevent silting.

328. And you do not think it would have the effect?—No, quite the reverse; because he allows the tide to flow in, but does not allow it to flow out.

329. Are you acquainted with the plan of the late Mr. Rennie?—I have seen it.

330. Have you examined it?—I have examined it generally; I know the position that the works would assume if executed.

331. Were there one or two entrances proposed by Mr. Rennie's plan?—There was one entrance to the westward, and of course he retained the present entrance.

332. Was his plan made with reference to a western entrance, rather than to improving the eastern one?—Yes, I think there is no doubt about that.

333. Therefore, it appears, that he considered the western entrance the one that ought to be attended to?—Yes, and that has been borne out by his son Sir John Rennie, in his plan given in 1827.

334. Does Mr. Anderson carry his piers into as deep water as that proposed at Trinity?—The point of the pier, but not the whole.

335. Taking into consideration the situation of the harbour of Leith and all the plans you have seen brought forward upon the subject, is it your opinion that the eastern entrance to that harbour could be so improved, under any circumstances, as to make it a good and sufficient harbour?—No, I do not think it can. The eastern harbour is in the midst of an immense sand bank, and that, taken in connexion with the river and the silt brought down by it, and the ebb tide meeting that river right in front, I do not think it is capable

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of any improvement. If it is capable of any improvement, the best way would be to take it down towards the eastward; but this plan, besides being expensive, has nautical objections to it.

336. You have been one of the parties that have been engaged in forming the plan of a harbour at Trinity?—Yes.

337. In drawing out that plan, to what extent did you propose that it should be carried with reference to the accommodation of vessels?—It is drawn out so as to be able to accommodate vessels of almost every size that come near the North.

338. You are aware of the extent of the steam navigation that at present comes to Newhaven?—Yes; I believe the longest vessel is 206 feet long, and the lock proposed by us is 250 feet.

339. Have you contemplated an accommodation for steamers?—Yes.

340. Did you take into calculation the accommodation necessary for vessels of His Majesty's navy?—The water is sufficient, and if any of them come round there they can be sufficiently accommodated in the dock; a vessel drawing 28 feet water can be kept afloat in the dock at all times.

341. Therefore, in drawing out this plan, you contemplated the accommodation of all classes of vessels likely to navigate in the Frith of Forth?—Yes.

342. And you consider that with that harbour constructed, those vessels would under all circumstances be well and sufficiently accommodated?—Yes.

343. Do you consider also that the present harbour of Leith, though it may to a certain extent accommodate small vessels, cannot be supposed at this moment to be in the least adapted to larger vessels?—Certainly not; the depth of water in the dock sill is only 12 feet 3 inches at the average of neap tides, and 17 feet at the average of spring tides. Now at spring tides a heavy vessel may get in, but she cannot get out again unless she waits for a spring tide.

344. You have stated your opinion that it is impracticable at any outlay to form a harbour from the eastern entrance, that would be sufficient for the commerce and trade of the city of Edinburgh?—At any reasonable expense it is perfectly impracticable.

345. Is there any practical difficulty in uniting the works at Trinity with the docks at Leith?—Certainly not.

346. Taking into consideration the capital already invested in Leith in the warehouses there, and taking into consideration the site of the land belonging to the Government, would not such a connexion be desirable?—If I was sitting down to make a connexion between the proposed harbour at Trinity and the present docks at Leith, I would say that the easiest and the cheapest way would be to make a railway, because it would be making an immense canal for the purpose of reaching docks where there is only 12 feet 3 inches of water. Now a railway might be made for a decidedly smaller sum.

347. In that case there would of course be the expense of trans-shipment?—A communication could be made with Leith by means of a railway at a much cheaper rate.

348. Are not you aware that a great proportion of the trade of Leith is carried on in vessels that do not draw above 12 feet water?—Just now it is, but the reason is obvious, because a vessel drawing more than 12 feet water cannot get in; an East India vessel was thrown ashore the other day from not having water.

349. Have you made a minute survey of the shore of Trinity?—I have.

350. Can you state the depth of water that there will be at the entrance of the proposed harbour?—It will vary from 11 feet on the one side to 10 feet at the other; the entrance may be said to be in 10½ feet water at low water of an extremely low ebb.

351. What is the distance from the lower drawbridge of Leith to the present pier head?—It is about 5,350 feet; rather more than a mile.

352. What is the distance from the present pier head to where you would obtain 10 feet of water, according to Dall and Leslie's chart?—It is 2,350 feet; that is to say, a pier to reach 10 feet water would require to be run out 2,350 feet from the head of the present wooden pier.

353. What would be the distance from the stone pier?—One thousand five hundred feet more.

354. Making in all, how much?—Making in all 3,850 feet.

355. Therefore, from the head of the present stone pier, before you obtain 10 feet water, you would have to go out 3,850 feet?—Yes.

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356. What is the distance from high-water mark to the 10 feet line opposite to the entrance of the harbour proposed by Mr. Cubitt?—Two thousand two hundred and eighty, according to Dall and Leslie's chart.

357. What is the depth of the entrance in Mr. Cubitt's plan?—According to Dall and Leslie's chart it is nine feet.

358. What is the distance from the high-water line to 10 feet water, in the situation proposed for Trinity Harbour?—One thousand eight hundred and fifty, according to the same chart.

359. What is the length of the two breakwaters proposed by Mr. Cubitt's plan?—The eastern breakwater is stated at 3,200, the western breakwater is stated at 1,200, and the western breakwater is projected from Newhaven Pier, which of itself is about 500 feet.

360. What is the length of the breakwater proposed for Trinity Harbour?—About 1,200 feet.

361. Have you seen the estimate for Mr. Cubitt's breakwater?—I have seen it in the printed Report, printed by permission of the Lord Provost, Magistrates and Council of Edinburgh, and the amount is 44,699*l.*

362. What is the estimate of the expense of the breakwater proposed to be constructed at Trinity?—For Trinity the net estimate is 34,374*l.*, and then there is 20 per cent. added for contingencies, making 41,249*l.*

363. Is the inner harbour to be deeper than the sill?—No, it is the same.

364. Is not it usual to make it lower, so as to admit of receiving any accumulation of matter?—No; Liverpool is rather higher, and Leith is rather higher; but we have made ours the same, because we consider it equal to the trade; we make no allowance for silting in the dock, because we think there cannot be any silting.

365. Do you think you will be able to construct that dock without coffer-dams?—Perfectly.

366. How would you manage in the parts that are under water?—The gates must be put in by a coffer-dam; no other part of it.

367. The check piers?—That is done by caissons.

368. Have you ever seen any thing of that sort executed before?—Yes; I think I have seen almost every harbour in the country in the process of execution.

369. By "the country," do you mean Scotland?—Scotland and England, and some in Ireland and on the continent.

370. Have you ever seen caissons employed in constructing such harbours?—No; but I have seen caissons and coffer-dams, and all those things.

371. Though you have not yourself been employed in the construction of harbours of a similar description, have you made yourself acquainted with harbours constructed under similar circumstances in other countries?—I have seen I do not know how many harbours in process of execution.

372. Do you make any provision for the water getting out of the dock below?—No, it is all clay.

373. And your works rest upon clay?—They do.

374. Is it usual to construct check piers of this description on caissons?—The check piers are particularly well adapted for being constructed upon caissons, because they are upon pillars.

375. Would the lock gates be perfectly tight?—Yes, perfectly tight.

376. Where have you seen any works on arches constructed upon caissons?—I have not seen any thing done upon arches on caissons.

377. Has not it been the usual practice of engineers of late to do it by coffer-dams?—Yes, but if you can do it in a cheaper way it is desirable.

378. Is not the experience of the whole profession against you upon that subject?—I should think not.

379. Where do you find any engineer practising the use of caissons at the present moment?—I do not know any place where they could be applied in the same way.

380. In any of the great bridges upon the Thames, have they ever made use of caissons?—They could not well be applied there.

381. Or in the entrance of the docks?—No, and I do not mean to apply them there, because there it requires masonry firmly connected, and in the piers it does not. London Bridge is not a case in point, because in this case the masonry is so much lighter; they could not well form a caisson so as to lower one of the piers of London Bridge.

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382. In point of fact, your experience does not lead you to know of any work of this sort being constructed upon caissons?—No, because I never saw any work precisely of the same sort.

383. What length of time do you calculate that it would take to complete the harbour of Trinity?—That depends upon the money afforded.

384. Supposing the money to be ready, and all the circumstances to be favourable?—I should think the whole of it could be done in about two years, because there could be a force put upon it in almost every part.

385. Would there be any means of making it available, during the progress of the work, for the purposes of trade?—Yes; they could not give dock accommodation, but they could give landing accommodation.

386. And for ships to lie afloat?—Not ships above 10 feet water.

387. Would it immediately become available as a ferry station?—Yes; I suppose a very short time indeed would make it available for the present ferry boats, which only draw seven or eight feet water.

388. And the communication with the coast of Fife would in that way be facilitated?—Yes, inasmuch as they could land the passengers at all times.

389. Can that be done in the course of the operation without inconvenience to the work?—Yes, a mere landing; they could give the same accommodation that they do at the present chain-pier.

390. Are the Committee to understand that the outer gate is always to be shut?—Yes.

391. So that a ship must remain till there is water enough in the harbour?—If she comes in at 12 feet water, the gate can be opened to admit her into the dock; but if she is drawing 15 feet water, and in the dock, she must wait there till there is 15 feet water in the outer harbour.

392. What is to be the size of your outer harbour?—It is about eight acres.

393. What would be the state of the surface of this water in the case of a storm?—It will be smooth enough, I apprehend.

394. What is to make it smooth?—The breakwater.

395. What is there on the east and west?—There are two check piers.

396. But they are upon arches?—Yes, but they are narrow arches, so that the sea will not break through them.

397. If the sea will not break through them, will it clear away the sand and silt?—Yes.

398. Supposing a vessel drawing 15 feet water is lying in the dock, and you want to let in a vessel drawing 12 feet water only, how are you to manage that?—By the double gates.

399. Are the Committee to understand that a gale of wind from north-east would not occasion so much swell as to cause a vibration, and render the outer gates leaky?—No, I do not think it would.

400. Is not the sea very high there?—Sometimes it is.

401. So high, that vessels sometimes drift from their anchors?—Sometimes.

402. Have you no apprehension that the scud of the sea, coming in by the eastern entrance, would create a considerable swell on the sea inside?—No; if the sea strikes on the end of the breakwater, it will not turn so sharp a corner as would be supposed; it would strike the outer wall of the dock, and lose itself in towards the land.

403. Do you think it would be practicable in any weather to dock ships?—Yes, because they have two entrances.

404. Even with the wind at north-east?—With the wind at north-east; a vessel would be quite still if she got inside.

405. You propose the ferry steam-boats to land their passengers at the check piers; do you think that one of those steam-boats, in a north-east wind, could lie at one of the check piers upon the arches?—Yes, because if she found herself not very well situated at one pier, she would go to the other.

406. If one pier did not afford protection, the other would?—Yes.

407. Suppose it was found that the outer harbour was not sufficiently extensive, could it be increased in size without any great increase of expense?—Yes, by running out the check piers.

408. And by removing the breakwater to a certain extent?—Yes.

409. What is the extent of the coffer-dam that you think would be necessary for building the wall connected with the gates?—It is 350 feet long; a double coffer-dam.

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410. Would it occupy the whole space between the two check piers?—No, it would not.

411. How are the other portions of that wall to be executed?—By building the outer wall, and putting a bank of clay behind it.

412. How is the outer wall between the check pier and the dock gates to be executed?—That is to be of solid masonry, by stones set on edge to above low water, and connected by a very simple process.

413. Those stones are not to be founded any deeper than what they would penetrate by their own weight into the clay?—Nothing more.

414. What description of stone is that part of the work to be of?—Freestone.

415. What is the size of the course of stones?—The best stones that can be got.

416. Would the stones get imbedded, so as to prevent the possibility of being moved?—Yes.

417. Is it not a very hard blue clay?—Yes, so much the better.

418. To what depth do you suppose they would sink?—They would perhaps sink six or eight inches.

419. Do you know what the specific gravity of that stone is?—The freestone in that part of the country is about 14 or 15 cubic feet to the ton, and the specific gravity of freestone is about 2.50.

420. Would you get the stones 10 feet long?—No, I do not know that they would be more than four or five.

421. Did you ever see a work of this sort constructed with stones lying upon an edge of so small a size as that?—If I could get them nine feet long I would prefer them.

422. Would you, upon your responsibility, use stones not more than four or five feet long?—In the principal part of the work certainly not, but in a great part of the work I would.

423. The question relates to the foundation of the outer line of wall in deep water?—Upon the inner part of the outer wall I would use such stones, but upon the outer part of the outer wall I would not.

424. What size would you require upon the outer part?—I would take them all the way through, and half through alternately.

425. In the gross estimates of the works, have you included the expense of the coffer-dam?—Decidedly, but I have not the detail, but it is all included.

426. Can you furnish the Committee with a detailed account of the principal items which make up your general estimate?—Yes, I can; but I believe it has been already lodged in the Private Bill Office.

427. Do you purpose to use the diving-bell for the purpose of setting this lower course of stones?—No.

428. In what manner are they to be deposited?—They are to be laid at an angle, and the one that is laid gives the position to the next one.

429. Is the ground upon which these piers are to be founded all of one nature, and perfectly even?—Perfectly even, so far as I can ascertain.

430. Do you mean to make the wall water-tight?—Not the wall itself, but it is made water-tight by the puddle behind it; it is a good stone wall made of those large stones, and a puddle put behind it.

431. You are understood to say that the puddle behind it is to make it water-tight?—Yes.

432. How will you prevent the puddle being washed out?—Because the stones are jointed as close as common dressed stones are.

433. Have you ever seen the works at Kingstown, near Dublin?—I have just seen them, that is all, because I have landed at the place.

434. Are there any stones used in that work so small as what you mention?—I suppose there are some much smaller.

435. Are there any smaller stones used except for filling up vacancies?—I did not look at it so minutely; we can get stones several tons weight very easily from the coast of Fife.

436. Are the Committee to understand that the walls of the outer lock are to be built in the same way as the walls of the outer lock at Hull and at the West India Docks, so as to be constantly tight?—Yes, and it is to be built of a very superior masonry; there are wooden coffer-dams used at it.

437. The whole extent from the outer lock gates to the inner lock gates will

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will be masonry, and perfectly tight?—Yes, the whole will be masonry, but the lock work will be a finer degree of work.

438. So that there is no danger of the water escaping so that the ships would ground?—I should think not; it would be foolish to propose it if we thought the ships would ground; the water will not ooze out of the lock unless the gates give way; the walls will be perfectly water-tight.

439. Are the sides of the dock proposed to be constructed in the same way as the northern extreme of it, except that portion of it next the gates which is proposed to be done by a coffer-dam?—No, there is a part of it to be made with a rubble foundation.

440. Would that confine water?—Certainly not of itself.

441. What is the nucleus of that?—Clay.

442. Something similar to the construction of Mr. Cubitt's eastern break-water?—No, it will be all under low water.

443. Is the upper part of the wall a solid wall?—Yes, that is a regular wall.

444. Founded upon a clay mound below?—Yes, founded upon a blue clay, which is sufficiently hard to carry any work; there are stones there more than 20 tons weight.

445. Would the clay that bears those stones prevent your masonry from sinking so deep as to exclude the water from perforating under it?—No, I do not care how little the stones sink into the clay; I do not think that affects the stability of the work at all.

446. Have you been constantly resident at Leith so as to have had an opportunity of witnessing the effect of gales of wind?—I have never resided at Leith, but I have resided at Edinburgh a long time, and I have been often down there.

447. Have you witnessed the effect of high tides and high gales of wind?—I have.

448. Did you form this plan of the harbour with reference to what the state of the weather might be under any circumstances?—Certainly.

Veneris, 22° die Maii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Phillip Flucker, called in; and Examined.

449. YOU are a pilot, residing at Newhaven?—I am.

450. How long have you been so employed?—I have been a pilot and fisherman these forty years.

451. What portion of that time have you been a pilot?—Thirty-three.

452. During that time have you often had charge of ships coming to Leith?—Yes, of all sizes; mostly going into Leith Harbour.

453. Have you ever had charge of ships drawing a depth of water that did not admit of their entering Leith Harbour?—Yes.

454. Frequently?—Yes.

455. A ship drawing what water do you think would safely go in?—Generally from 12 to 14 feet go safely in.

456. Have you ever, or frequently, known accidents happen to ships trying to make the harbour?—Yes, frequently.

457. What has that generally been occasioned by?—Sometimes when they waited a long time for water; and then when they tried upon the top stream, they got aground upon the bar.

458. Then those accidents generally were occasioned by want of sufficient depth of water?—Sometimes with heavy vessels; but sometimes with small vessels going in when the water was going away; but with heavy vessels, generally from want of water.

459. Can you name any particular instance of recent occurrence?—Just before I came up here, a vessel from India was coming in, and it was a top stream, about 14½ feet, and she struck the bank a considerable way out of the harbour, along by the Martello Tower.

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460. Were you bringing her in?—No, I was an eye-witness to it.

461. What tonnage was she?—Between 400 and 500 tons.

462. What was her name?—The Isabella; the first ship from China to Leith.

463. Did she take the ground near the Martello Tower?—She struck there, and washed away until she passed the harbour altogether, and grounded on the outside of western pier.

464. Then what happened?—Then they let go her anchor, and brought her head to the sea.

465. Did she subsequently get into the harbour?—Not that tide or next; they took three tides to get her in.

466. Are there any other vessels that you have lately known to have met with accidents?—The William and Ann, a whaler, lately ran aground, and could not get into the harbour.

467. In both those instances if bad weather had come on would those vessels probably have been lost?—Yes, they would stand every chance for it.

468. Were you acquainted with Leith Harbour before the extension of the piers?—Yes, I was.

469. Has a greater depth of water been obtained by the extension of the piers?—Yes.

470. To what amount?—The pilots generally allow about two feet.

471. In consequence of this additional depth, is the fair way of the channel narrower than it was?—I think it is.

472. A little narrower, or considerably narrower?—Considerably narrower. I think if one vessel was lying aground in the middle of the channel, another vessel could not get past her if it was of any size.

473. Therefore it is necessary to make the channel very accurately, and you must come in with great caution?—Yes, and so we do.

474. Has this additional depth of water been obtained by the extension of the piers or by dredging?—We think mostly by dredging.

475. Does stormy weather make any great alteration in the depth of the water in the entrance channel?—Yes, it does.

476. Does it make it more difficult of entrance?—Yes.

477. Therefore, is it customary for you, if it is blowing pretty fresh, to attempt to bring in a vessel of 300 or 400 tons into the channel?—It depends upon what the wind is.

478. Supposing the wind to be quite fair, if it was blowing hard?—If it is a top stream it is very proper; because if we miss that opportunity the tide will take off, and the vessel would be detained until next stream.

479. With regard to the harbour of Leith, do you or not consider it a difficult one to enter?—Yes, we do.

480. And by no means a certain one?—By no means a certain one.

481. Do you think any harbour could be constructed upon the south coast of the Frith of Forth in the vicinity of Edinburgh, which it would be advisable for ships of any burthen to attempt to enter when the wind blew hard?—Yes, I do.

482. From your acquaintance with the harbour of Leith, do you think that its present entrance is capable of being so improved as to make it a good harbour?—No, I do not think it.

483. Will you state your reasons for thinking so?—In the first place, it is in the centre of everlasting banks of sand.

484. It is a channel surrounded by banks of sand?—The whole of it.

485. Not in every direction, is it?—The East Indiaman that came in took the ground before she came to the harbour upon banks of sand. It is deeper in than it is out.

486. Have you heard that there is some idea of making an entrance to the present docks from the westward?—We have heard of it at Newhaven.

487. Do you consider that could be effected?—Yes; they could get a good entrance, of course, at least depth of water.

488. Do you consider that a good entrance could be obtained to the present docks at Leith by a communication from the westward?—Yes, a deep entrance.

489. How far westward do you think it would be necessary to go?—Right off Newhaven to the westward of it.

490. Is the depth of water off Newhaven as great as it is in any part of that coast

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coast from Granton to Leith?—Yes, but a little to the westward it is cleaner ground. There is a bush in the way, and they must go outside of that bush for a safe entrance.

491. What is the nature of the ground where the proposed harbour of Trinity is to be?—It is a tough blue clay.

492. Suppose a western entrance was constructed from Newhaven, what effect do you suppose it would have upon the property of the pilots and fishermen at Newhaven?—It would just take it all away; it would block us up, we would be a country town then.

493. Is there any situation to the westward of the chain pier at Newhaven where you could beach your boats?—No, without its being a long way off.

494. Supposing such a plan to be carried into execution, would it interfere very much with your usefulness?—Very much indeed.

495. Both as pilots and fishermen?—Yes.

496. If a plan could be devised by which a canal could be formed that would not interfere with the beach, of course it would not have the effect you have stated?—Exactly so.

497. If the beach was left open, of course you would not be damaged in your profession, but you would be able to go on as you do now?—Exactly so.

498. Are not you in point of fact very much in the custom of drawing your boats upon the part that belongs to the Ferry trustees?—Sometimes in bad weather we are forced to do it.

499. Do you know any part of the shore to the westward of Newhaven where a good harbour could be constructed?—We think that Trinity would be a fine place at the chain pier.

500. Is it your opinion as a pilot and knowing the coast, and having had a great deal to do with shipping there, that Trinity is the best situation for a harbour?—I think it is the best.

501. Do you think a point might be found between Newhaven and Leith that would not be a bad situation?—It would not be a bad situation.

502. But not so good as Trinity?—Not so good as Trinity.

503. You have heard of course that it has been talked of to construct a harbour at Granton; what is your opinion with regard to Granton?—They might make a very capital harbour there, but a bad roadstead.

504. Do you consider that the harbour that might be constructed there would be a better harbour than the one at Trinity?—No, I do not; they might make a harbour as good, but the roadstead is very bad.

505. Is it dangerous?—Dangerous! I was aboard of a ship a good many years ago, a Danish East Indiaman; she had Government stores in her, and we drove off Granton, and we were upon the eve of cutting away all our three masts, and we had to lie or go to pieces before high-water, and then we cut from our anchors and run up the Forth over the Drum Sand with a very great risk indeed, and with a stormy wind. The anchor will not hold at Granton, it is a soft sand, but off Newhaven it is a hard clay.

506. Is it your opinion that such an occurrence would be likely frequently to happen if there were a harbour at Granton?—I could not say, but it is very natural for the captain of a ship, if he has not got a pilot on board, to run right off the harbour to bring his ship too at the place where he has to discharge.

507. What would be the consequence of a vessel running to Granton with the wind at north-east missing the harbour?—She would become a wreck, of course.

508. With regard to the shelter of these harbours, do you consider that the harbour at Granton, or the harbour at Trinity, would give the best shelter for the vessels running up the Frith?—The harbour at Trinity has a little shelter from Inchkeith.

509. Has Granton none?—No, it is away to the northward; the sea comes round the island, and that makes the anchorage so very bad off Granton.

510. Do you consider that the island of Inchkeith would afford some shelter to the harbour of Trinity, whereas it would afford none to a harbour constructed at Granton?—I do.

511. Supposing a vessel could not get into the present harbour at Leith, and consequently ran up the Forth, where would you consider the best anchorage for that vessel after passing Leith Harbour?—Right off Newhaven; we have the

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Pentland-hills; there is a large gap into it, and there over Edinburgh Castle and the Earl of Roseberry's house to the north point of Cramond Island, we count that the proper roadstead.

512. How does that anchorage bear from Trinity?—I think Trinity will bear from that about south-west.

513. Consequently it is almost in a direct line from Trinity and Kinghorn?—It is very near it; a little to the westward.

514. Suppose that a vessel was anchored where you suppose the best anchorage to be, what distance would that vessel be from the entrance to the proposed harbour at Trinity?—I think it would be about two miles.

515. A vessel coming from that anchorage to the harbour at Trinity, would she be able to make a direct course, or would it be necessary to make any circuit?—She would go right in; there is nothing in the way.

516. What distance would ships at this anchorage be from Granton?—I think about three miles.

517. You know the stone pier at Newhaven?—Yes.

518. For what purpose was it built?—To make a ferry station.

519. What depth of water was there at the outer end when it was first built?—Six feet at low water.

520. What is there now?—About six inches at low water.

521. How has that been occasioned?—The sand has come and accumulated round it.

522. How do the ferry steam vessels land their passengers at low water?—With small boats.

523. Do the London and the northern steamers anchor off Newhaven?—All of them, and they send away passengers in the small boats, and their goods in large boats.

524. Is not that attended with very great risk and inconvenience?—Sometimes it is.

525. Do they land their passengers at the stone pier at Newhaven?—Yes.

526. Did an accident ever occur there in consequence?—I never heard of any, or saw any loss of life; but I have seen some property going.

527. Supposing those steam vessels to be lying there, and strong winds come from the northward and eastward, do not you consider that they are in considerable danger?—Yes, if they are close in taking in passengers.

528. Consequently they would not lie there if they had a good and sufficient harbour to go to?—Not at all.

529. It is not a matter of inclination, but a matter of necessity?—Yes, they cannot do otherwise at present than lie there; no harbour for them to go to.

530. You have stated that Trinity is a particularly good situation for a harbour owing to the shelter it receives from Inchkeith; does not Inchkeith equally shelter the pier at Newhaven?—It does undoubtedly.

531. You stated also there is some particularly good anchorage ground between Kingordon and Trinity; is not that equally near to Newhaven?—Yes, the very same.

532. What is the nature of the ground exactly off Newhaven Pier?—It is all good ground after you are off a little, but close to Newhaven Pier it is rocky.

533. When you say close to Newhaven Pier, what distance do you mean?—About 100 yards or 200 yards; there are three bushes of rock.

534. Would it offer obstruction to any vessel making the harbour at Newhaven?—No, according to the plans at present, the pier goes quite across one bush of rocks.

535. Will not those rocks interfere materially with Newhaven as a harbour?—No, the west pier proposed runs right over one bush of rocks; the other two bushes of rocks are under low water.

536. Then this resistance would rather assist in forming a harbour?—According to the plan I have seen, because Mr. Cubitt's plan goes right over the east bush.

537. Would not the place where your boats are at present be better protected, if Mr. Cubitt's plan took place, than it is now?—This canal runs right across us too.

538. Suppose he gave you accommodation for your boats in the outer harbour,

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harbour, would not that answer the purpose?—It might do very well, but in low water it would mud up, and we cannot launch a boat through mud.

539. If there was a wall on each side, would the harbour mud up within?—Yes, of course it would.

540. Where would the mud come from?—There is some always every tide from Leith; we have a very good example of that.

541. Is not there a river coming down at Leith?—But where the river does not come, the river just keeps the channel, and in all the harbours that I have seen there is always mud left.

542. Are those deep water harbours?—No, they are tide harbours; you cannot get into the north-east harbours that I speak of but at high water.

543. Are you aware that Mr. Cubitt's plan takes in vessels at low water?—Yes; but I have never seen any harbour on the Frith of Forth that would take a vessel in at low water, or even a boat.

544. Except Mr. Cubitt's?—Yes, but that is only a plan.

545 You are acquainted with the ferry communication; do you consider that the Trinity Harbour would be a good station for the ferry?—It would be very good, as it would always let the boats come in at low water.

546. Supposing the wind came on to blow strong from the north, could you get your boats out of Mr. Cubitt's proposed harbour, supposing you were called upon suddenly to assist a vessel in distress?—If the wind was to the north-north-west it would be difficult to get out, but to the north-east we could, because we would have a little shelter before we got to the pier end.

547. Do not the north-north-west winds prevail very much there?—Very much; and westerly winds and south-west.

548. Consequently, you would consider that any harbour that was subject to difficulty of getting out when a north-north-west wind was blowing would frequently be subject to inconvenience?—Yes, when the wind blew that way.

549. Have you seen the plan proposed for the Trinity harbour?—No, I never saw that.

550. Might not a vessel be by a steam boat drawn out or in, in any wind, according to Mr Cubitt's plan?—Yes, if the wind is moderate.

551. Or from the present entrance at Leith?—Yes, if the ship has water, and it is frequently done.

552. From the plan of Trinity Harbour which has been submitted to the Committee, it appears that it is intended that there should be on each side of the breakwater an entrance of 150 feet wide between the check pier and the breakwater; now, do you think that in a gale of wind it would be prudent for a vessel to attempt to make that harbour?—There is one advantage that it would have above any other that I have seen; she has two chances, because, if one does not do she has the other, and if she cannot get round here and let go her anchor, she has room to swing before the water flows to take her into the dock. Now, at any other harbour there is just one entrance, whether they are pleased with it or not; but here there are two, and certainly one is commonly smoother than the other, and then the pilot would generally take the best, and I think this is an advantage.

553. Are the Committee to understand that you think it would be considered prudent to run for this harbour in bad weather?—Bad weather is the very time to run for a harbour.

554. Do you think that a ship of large burthen would generally prefer running for a harbour of this description rather than keep in the Frith of Forth?—Certainly, by all means.

555. Is it your own opinion that, as far as you have seen the plan of that harbour, it has an advantage over all the others that you have seen as to the facility of entrance, under all circumstances of wind and tide?—It has.

556. You think there would be no difficulty, in such weather as you speak of, in getting round the breakwater between that and the check pier?—I think so.

557. You would have no difficulty as a pilot in undertaking to pilot a vessel round there?—No, I think it would be the easiest harbour of all, because there is a choice, and in any other harbour there is no choice.

Thomas Wilson, called in; and Examined.

Thomas Wilson

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558. YOU are a pilot at Newhaven?—Pilot and fisherman.

559. How long have you been a pilot?—I have been a pilot and fisherman, one or the other, thirty years.

560. What part of that time have you been a pilot?—I have been seven years a pilot.

561. You have heard the evidence of Flucker, did you attend to it?—I did.

562. Do you agree with him in opinion?—I do.

563. Is there any particular point stated by him that you do not agree to?—No; I agree to every thing he stated.

564. Is there anything connected with nautical information that you can give in addition to what he has stated?—No.

Mr. *John Gibb*, called in; and further Examined.

Mr. *John Gibb*.

565. YOU have stated that you have had considerable experience in executing works in deep water; were you present when Mr. Miller was examined the other day?—I was.

566. Have you had the execution of any works of a similar description, situated in nearly the same way, where the deep water would be nearly the same; and if so, will you state what your experience upon the subject is?—I may mention, first, Greenock, where I superintended; the work was executed about twenty-five or thirty years ago, under the late Mr. Rennie; and an extended pier at Greenock was done in caissons for perhaps 900 feet in length on both sides of the wall, in a depth of from nine to eleven feet water. In the Dundee Harbour an outer wall was formed, and, after forming that outer wall round for the purpose of constructing the locks, coffer-dams were placed across the entrance, nearly similar to what is proposed to be done at Trinity. I have a plan of it in my hand—[*producing the same.*]—So far for Dundee Docks. Then I shall mention next the breakwater at Peterhead, and the external part of that breakwater, which is in a very exposed situation, is done with a sloping rubble wall on the outside, and upon the inside there is a broad quay, where the large whalers discharge, and the inside of that wall was built in an inclined manner; the stones slipped one after another. It is done from 11 to 14 feet water at the point, and that wharf was wholly constructed by pointing the edges of the stones and slipping them down one after another. In Aberdeen Harbour the extended pier is about 2,000 feet in length, about 900 feet of which was executed under my direction; it was done in that way. The Aberdeen breakwater was done with rubble stones, and put at a slope of five to one, diminishing at the root to two to one; the point of that breakwater is constructed with hammer-block masonry set down on, and at right angles with, the slope.

567. Do you consider that the constructions for the Aberdeen pier are more difficult in consequence of the local situation and the stormy state of the coast there than they will be at Trinity?—I apprehend that Peterhead and Aberdeen are perhaps the two most stormy ports in Scotland, and the most difficult for the construction of such works.

568. But notwithstanding this the construction has been effectual?—Yes.

569. Are not the breakwaters at Peterhead and at Aberdeen mere breakwaters, and not dock walls?—The breakwater at Peterhead has a parapet wall all round; it is brought up to a height of 12 feet above the level of the platform of the wharf.

570. Is it a floating dock?—No, it is a tide harbour.

571. So that it is not intended to confine water as the Trinity Harbour is?—No.

572. Has not the pier at Aberdeen been washed away more than once?—The point of the pier at Aberdeen was washed away while it was constructing, while it was perpendicular.

573. Were the stones enlarged afterwards?—Not at all; only it was made a slope instead of being perpendicular.

574. Are those slopes upon the breakwaters you have enumerated flatter or not so flat as that proposed by Mr. Cubitt?—They are flatter all towards the extremity.

575. Are

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575. Are you aware of any instance of constructing a basin to be water-tight in the way you have described by letting the stones slip down?—The external part of Dundee wall was done in that way, and those are as beautiful docks as any in the kingdom.

576. Is the inside wall of ashler?—The inside walls are ashler.

577. What is the thickness?—They are of various thicknesses; I suppose the division is 70 to 80 feet. They are not near so wide as the width of the dock walls proposed at Trinity; and I may mention that lately I accompanied Mr. Telford upon his last journey to Scotland, when we planned a wet dock to Greenock to extend the outer wall in the same way, and to form a tide lock with a coffer-dam, after the external walls were finished, similar to what is to be done at Trinity.

578. Was Leith done in that way?—The tide lock at the entrance to Leith Harbour was constructed by a coffer-dam of rubble stone across the entrance, and I may mention that the pier at Troone Harbour was constructed in caissons.

579. How long has the Dundee lock been completed?—Last year, I think, Earl Grey's Dock was opened; the other has been completed about 14 or 15 years.

580. Is that one of the same construction?—It is of the same construction.

581. Has that been water-tight the whole time?—The whole time.

582. And it has answered perfectly well?—Perfectly well.

583. Is there as heavy a sea off Dundee Harbour as there is in the Frith of Forth?—Perhaps not, but I do not see that that makes any difference as to the principle, as the proposed breakwater will protect the entrance.

James Jardine, Esq., called in; and Examined.

584. YOU are a civil engineer?—Yes.

James Jardine, Esq.

585. Are you well acquainted with the docks at Leith, and with the proposed harbours at Trinity and Granton?—I am acquainted with the docks at Leith, but not particularly with the designs of the proposed harbours at Granton or Trinity, or towards Newhaven.

586. What is your opinion of Leith as a harbour in its present state?—It is a very bad one.

587. Have you seen Mr. Cubitt's plan for the erection of Leith Harbour?—No; I have seen a small engraved plan, but I have never seen the original plan.

588. Do you think it would be possible to improve Leith Harbour, so as to make it a sufficient harbour for the commerce of Edinburgh?—I think it quite possible.

589. Without going to any immoderate expense?—That is a relative term. It would require a considerable expense to make a good harbour of it with a good entrance.

590. Do you think it would be possible to improve the present entrance to the harbour, so as to make it really available for the purposes of the port?—It might be improved, but I think never made very good.

591. Do you think an entrance might be made from the west to the present docks?—Yes.

592. Do you think a good and a safe entrance could be made in that way?—Yes, certainly.

593. Could it be done so as to admit steam boats and vessels of considerable burthen?—I think it might.

594. Could it be so constructed as not to be liable to silt up?—I apprehend none can be constructed upon that part of the coast that is not liable to be silted up, because there is a considerable quantity of sand and mud that is moved by strong winds, and I apprehend that every thing that is constructed there must be partially liable to be silted up.

595. Could that silting up be removed by dredging and other means of that kind?—Very readily by dredging; any silting up there would be light stuff.

596. And the risk of silting up would be less towards the westward than at the present entrance?—I think so.

597. Are you of opinion that in the present entrance what is brought down by the water of Leith tends to make a greater deposit than there would be, if there was an entrance made to the harbour at the west?—I think so; because

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I know that great quantities of gravel and sand and mud are carried down from the upper parts of the river every flood.

598. Are you of opinion that an entrance made at the west could be kept clear much more readily than the present entrance at the east?—It would be easier, but I cannot speak as to the degree.

599. Would there be deeper water if the entrance were made near Newhaven than an entrance at the east?—Yes, I think there would, and it would be easier to keep it deep.

600. Have you ever turned your attention as to where you think an entrance towards the west ought to be placed?—I have looked at it for some time past, but I have not recently made any particular measurement for that purpose, because as I was not professionally employed, I thought it would be improper to interfere with those who had been so employed.

601. If the plans were submitted to you now, could you give any opinion as to which you think upon general principles would tend most to improve the harbour at Leith with the least expense?—I think not by a cursory view; it would require a minute examination to form a sound opinion upon the subject.

602. If you were to examine the plans now, and afterwards to visit the ground in Scotland, do you think you could within a short time form an opinion upon that subject?—I think I could.

603. Could you do that by seeing the plans before you left London, or would it be necessary for you to survey the ground itself?—I think it would be necessary to survey the ground itself, to see how far the plans correspond with the ground.

604. Assuming them to be correct in that particular, could you venture to give any opinion as to which of them you think most likely to attain the object in view?—No, I think not, without inspecting the ground.

605. What do you consider the best mode of building water-tight walls, in 10 or 12 feet water, for wet docks?—I think the safest and best mode is by a coffer-dam.

606. When you speak of an entrance to the westward, how far west, and into what depth of water do you contemplate?—The depth of water, I think, should not be less than 12 feet at low water of an ordinary spring tide, which I deem to be 18 feet between the level of low water and that of high water.

607. How far west do you suppose it would be necessary to go to obtain that depth?—Very likely near to Newhaven pier.

608. If an entrance was to be formed, would there, in your opinion, be any serious difficulties to the construction of a communication between that entrance and the present docks at Leith?—No; I think a communication might be made very safely at no very great expense.

609. Do you know whether it is the case that you must go much further out off Newhaven pier to get the depth of water you mention, than would be necessary by going a little further to the westward?—I apprehend that it would be better to go into deep water there than to go further westward, because that would shorten the distance between the docks and the entrance.

[*A Plan was shown to the Witness.*]

610. Have the goodness to look at that map; you will see a red line, which is the line of 10 feet water; assuming that plan to be correct, would you not have to go further off Newhaven to obtain 10 feet water, than you would have by going a little further to the westward?—You would have to go further from Newhaven seaward to deep water, but you would not have a longer line by going into deep water near the east end of Newhaven.

611. Would it not increase the expense to have to go further out to sea in order to get into deep water?—It would depend upon the mode in which the breakwaters were constructed, whether it would make a material difference or not.

612. Would you propose that there should be merely an entrance and an outer harbour, or would you propose that there should be also a floating dock?—I think there should be only an entrance and an outer harbour; an additional floating dock for Leith is quite unnecessary, because the two wet docks already constructed at Leith are sufficient for double the present trade of the port.

613. Might not the outer harbour silt up more speedily than if it was to be made

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made a floating dock?—I do not think there would be any great difference; the water would be nearly quiet in either way.

614. Do you consider that such a breakwater as is represented upon the Trinity plan would be required to protect the mouth of the entrance both to produce quiet water and to prevent silting up?—I apprehend it would not prevent its silting up.

615. Those check piers are supposed to be built upon arches?—Yes, but they would form a greater obstruction to the tide than exists at present.

616. It is not your opinion that the construction of these piers upon arches would have the effect of preventing the silting up of the outer harbour?—No, I do not think it would.

617. Supposing an entrance to be constructed for the Leith Docks near Newhaven, might not vessels in any state of the wind be towed in and out by steam boats when the wind was unfavourable?—Yes, I think they might.

618. Are you aware that, in consequence of the chain pier being erected at Trinity somewhat similar to these check piers, a greater depth of water has been obtained?—I do not know whether there has or not.

619. If there has been, would you ascribe it to the erection of the chain pier?—No.

620. If an additional depth of water has been gained at the point of the pier, how, in your opinion, has that been obtained?—It may have been obtained, perhaps by the piles driven to form the head of the chain pier obstructing the water in that part, and of course the water, instead of going along as it used to do, will run round the point or head of the pier.

621. Would not the same effect be produced by the check piers?—Close under the arches, but not all the way.

622. Would not every arch be an end for that purpose?—It would be deepened a little under each arch, but it would be filled up more than at present on both sides of each arch.

623. If you were called upon professionally to advise upon the construction of these check piers with those arches, would you do it by means of caissons or by coffer-dams?—It would depend upon whether you wanted it to be made very permanent or not; I should think coffer-dams would be the best way of doing it; it might also be done by caissons, but not so well.

624. Did you ever see caissons used in similar situations?—No.

625. Do you consider it of much importance in what particular direction the opening to the harbour should be made, if there is a steam boat employed to tow the vessels into the harbour, that is to say, whether there is a single opening or two openings?—I should think that Mr. Cubitt's would answer the purpose very well, because you can come in either with the flowing tide or the ebbing tide, or with the wind at north-east or north-west, which are the two most difficult winds on that part of the coast.

626. What is your opinion with regard to the double entrance proposed to be made at the Trinity Harbour?—I think there is rather too little room; I think it should be larger.

627. Would steam boats be of much use in rough weather in towing vessels into the harbour?—Yes.

628. Do not steam boats generally let go in very rough weather in the Frith of Forth?—They sometimes do, but they also tow in vessels against a head wind, and by having a tug-boat in rough weather, you can come into Leith Harbour before low water.

629. Can you, after looking at these two plans, state any opinion with regard to the relative merits as they appear upon the plan?—No, I think it would require mature consideration in order to give an opinion.

Martis, 26° die Maii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Mr. *Richard Fraser*, called in; and Examined.

Mr. *R. Fraser.*

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630. YOU command a steam-boat between Leith and London?—Yes, the Soho.

631. Have you long commanded her?—I have commanded one or other of the steam ships six years.

632. Were you acquainted with the harbour of Leith previously to that?—Yes, I was.

633. How long have you known the harbour?—I have been chief officer and commander of a ship these 18 years.

634. Do you consider yourself perfectly well acquainted with the harbour of Leith?—I do.

635. Are you acquainted with the improvements that have taken place in the harbour?—Yes.

636. Do you recollect it previous to those improvements taking place?—Yes.

637. Do you consider that the alterations that have taken place have given any increase in the depth of water?—Yes; I suppose from 12 to 18 inches, but very narrow.

638. Do you mean at the entrance of the channel?—No; there can be none at the entrance of the channel upon the bar, but at the pier-heads it is increased from 14 to 18 inches.

639. The water upon the bar is the same as it was, but after passing the bar there is a greater depth of water?—Yes.

640. Is the channel less wide or wider than it was?—It is the same.

641. Do you consider that the harbour at Leith at its present entrance is capable of admitting vessels of all descriptions?—I should consider not.

642. Is it not the practice of the steam-boats to anchor off Newhaven?—Yes, or in Leith Roads.

643. But never under any circumstances to attempt the harbour?—We might attempt the harbour at tide times, but we do not like to allow our ships to ground.

644. Has the Soho ever been in Leith Harbour?—No, she has not.

645. Are there not many circumstances attendant upon stormy weather and heavy sea which make it very important to get into the harbour instead of lying in the roadstead?—Yes; it would certainly be the case, because very often in the fall of the year and in the winter we are obliged to get our steam up and keep it up for 12 hours for fear of the ship parting from the anchor.

646. Do you think that a good and sufficient harbour would be of great importance to the trade, both as a matter of safety and saving of expense?—Yes; I think it would be the greatest blessing that could be conferred on Scotland at large.

647. As you are in the habit of anchoring at different parts, what do you call the best anchorage ground?—I consider the best holding ground and the deepest quantity of water are between the two piers, I mean between the stone pier and the chain pier.

648. What depth of water is there in that part?—I generally anchor in four fathoms, which is as much water as you can get, without you go to the middle of the roadstead.

649. At what distance do you find four fathom from the chain pier?—I have laid nearly at low water in 12 feet; I should say within 200 yards or 300 yards right between the two piers.

650. You know the situation of Trinity?—I do.

651. Have you seen any plans for constructing a harbour there?—I have.

652. Has your knowledge of the coast there and of the tides and other circumstances enabled you to state whether you consider Trinity is or is not the best situation for a harbour?—I consider that Trinity is as good a place as any to the west of Newhaven pier; I consider it impracticable to get any to the east

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east of it; taking in view the two points to be near Leith and Edinburgh together, I think it would be the most suitable.

653. Have you ever been driven or gone to the anchorage near to which the proposed harbour of Granton is?—No, I never have; but I know the neighbourhood of it, and the shoals to the west of it.

654. Would you or not consider it a safe anchorage to the eastward of those shoals?—I should consider that if a vessel was bringing up in a gale of wind or riding in a gale of wind, the further you are from any danger the better, because if you anchor anywhere to the westward of Trinity you immediately approach the Drum Sands, which is not very pleasant to the commander of a ship.

655. Might not a vessel coming up the Forth in severe weather with prevailing winds from north or north-east, and missing the harbour constructed at Granton, be very apt to be stranded in consequence of those shoals?—If she was immediately bound to the harbour there and missed it, there would be no alternative left with the wind at north-east.

656. Do not you frequently find difficulty in landing your passengers?—Very often; sometimes we are 12 hours before we can land one in winter.

657. Can you state any circumstances where great inconvenience has been occasioned?—We are in the habit frequently of paying damages done to goods in disembarking and embarking them, and I myself know, not two months ago, that two families would not go on shore for 12 hours after they arrived on account of the bad weather, and even then they would not go at all without I went in the boat with them, they were so frightened.

658. Under all those circumstances, has it occurred that the vessel you have had charge of, in consequence of being obliged to continue at this anchorage, has been subject to very considerable danger?—Frequently.

659. Can you state any particular circumstance that has occurred where you think that danger was very pressing?—Some years ago, when I commanded the City of Edinburgh, I have frequently had to get her under weigh by steam, and go to other parts to prevent her driving; all the anchors in the ship would not hold her.

660. After all you have stated upon the subject of the want of accommodation, are you of opinion that with reference to the steam trade it would be a matter of the greatest convenience, and in every respect most desirable, to have a good and sufficient harbour upon some part of the coast?—Yes, I do consider that it would.

661. Have you seen the plan of the proposed Trinity Harbour?—I have.

662. Do you think you could, in a strong easterly gale, safely enter that harbour?—If it is according to the plan, I consider that it would be practicable at either the one entrance or the other.

663. Supposing there was a strong easterly gale and a swell, at which entrance would you enter?—From the western entrance.

664. Meeting a strong easterly gale, and entering from the western entrance, would you consider that perfectly safe?—If there was water enough, I should consider it perfectly safe, because, if you run for it with the wind at east in a heavy gale of wind, you would only have to haul your ship up south, under the lee of the western breakwater, before you would be immediately in a pond, if the breakwater is made as it is in the plan.

665. Would not the sea break over the side wings of the harbour?—That is according to the height it would be built.

666. Are you aware of the height proposed?—I am not.

667. Supposing the height of the side walls to be 12 feet?—It would be the breakwater that would prevent the swell from breaking over, not the side walls.

668. Is not the breakwater to the north?—The breakwater extends from nearly west to east.

669. Supposing a strong easterly gale, would not that break over the side wings?—If it is six feet above the surface of the water, all that would break over would not hurt the ship; it would be only spray, not sea.

670. Are you of opinion that in a strong easterly gale no sea could break over that wall so as to affect a vessel lying there?—No, because if the breakwater is six or seven feet above the surface of high-water tides, it could only be spray that could break over, not sea.

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671. Does a strong easterly gale never break higher than 20 feet?—Not in the Frith of Forth.

672. Do you know how high it breaks over the Bell Rock?—Yes, but the places are very different. The Leith Roads is protected by Inchkeith; the Bell Rock stands in the midst of the German Ocean.

673. Does not it break higher than 60 feet at the Bell Rock?—It may break upon the rock, and the spray may ascend so far, but it never breaks 60 feet.

674. Are you compelled at present to pay dock dues, although you cannot enter the harbour?—I cannot say as to that; that rests with the company. When I ran a vessel into Leith some years ago, the City of Edinburgh, I had to pay dock dues when I could not occupy the dock, because the dock entrance would not allow my ship to go in, and I consider it a very hard case that I paid for the wet docks for thirteen voyages, and could not occupy them.

675. Do you consider the charges very high?—I do not consider the charges high, provided they had given me accommodation for what they charge me for.

James Walker, Esq., called in; and Examined.

James Walker, Esq.

676. YOU are a civil engineer?—I am.

677. You are the president of the society of civil engineers, in London?—I am.

678. Have you had considerable experience in surveying and reporting upon harbours in various parts of the kingdom?—Yes.

679. Have you recently made any survey of any part of the coast of the Frith of Forth?—Yes.

680. By whom were you employed?—By the Duke of Buccleugh.

681. Will you state to the Committee where his property is situated upon the coast which you have recently surveyed?—His Grace's property is situated upon the shore to the westward of Newhaven.

682. How far to the westward of Newhaven?—From half a mile to a mile.

683. Is that a situation where a harbour or a pier could be advantageously constructed?—I think it is.

684. Could you get a considerable depth of water there at a short distance from the shore?—Yes, we get into deep water there at a shorter distance than upon any of the other plans that have been proposed. The distances have been stated, no doubt, to this Committee before by other engineers; I may say that Messrs. Stevenson & Son were the engineers employed by his Grace; that the distances to deep water were stated by them; that there was some difference of opinion respecting their correctness. I took with me a very intelligent assistant, Mr. Hartley, who remained after I had gone, the weather being such when I was there, as not to enable me to take the soundings; and the soundings taken by him fully confirmed the correctness of what Messrs. Stevenson had done; perhaps I ought also to add that his Grace's instructions to me were, not to confine myself to any particular examination of Granton as a situation for a harbour more than any other, but to look generally at what I might conceive to be the best to relieve what are considered the present wants of the town of Edinburgh, his Grace distinctly saying that unless that should prove to be the case, he had no inclination to enter into any speculation at Granton or any other place.

685. Did you accordingly make any survey of the present Harbour of Leith?—Yes; I was in Edinburgh about ten days, during which time my whole attention was given to the subject of the different situations that have been proposed for harbours to the present wants of Leith, and the best way of remedying them.

686. What conclusion did you come to?—As a general question, the conclusion I have come to is this, that taking all the interests together, the best thing that could be done would be to extend a pier or jetty out to deep water, to enable the steam vessels to embark and disembark their passengers, and to unload and take in cargo.

687. From where?—I think much more has been said about the particular situation than there is occasion for; I do not see, excepting that Granton is nearer the shore than any other situation to get into deep water, that there is much difference about it one way or the other. Granton, again, is further from the principal thoroughfare in Edinburgh; and it is stated by the Trinity Dock party that there is more foul ground in the front of Granton than more

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to the eastward, near Trinity. A principal object of the pier being the accommodation of steam packets, it does not appear to me, that even supposing that opposite to Trinity there is a better roadstead, that the distance is such as to make it at all important in regard to the general question for steam packets; nor do I think it important as regards the communication with the land. But Granton is certainly, as I have already said, further distant from what I may call the centre of movement in Edinburgh than any point more to the eastward, unless roads were made communicating immediately with the city, which would render it nearer to that part of the city to which it is opposite, and nearer to the communication with the Union Canal; but I consider at present that the point from which I would measure the distance to Edinburgh would be somewhere opposite the Register Office.

688. What is the conclusion you come to upon the view of the whole subject?—It appears to me prudent in the first place to do as much and not more than is requisite to relieve the present wants; those wants I conceive to be, first, the difficulty of landing goods and passengers from steam packets; that is the first and the great objection; that I think would be remedied completely by extending a pier or jetty out into deep water, with a cross-head upon it, which would enable steamers to come at all times of the tide alongside, and, having discharged their cargoes or passengers, to go off to the roads, and come alongside again to take them in.

689. Do you mean to express an opinion that it is not material from what point of the coast this jetty is projected?—If you carry the question to any great extent of distance it would be material; but I do not think, as regards the distance between Newhaven and Granton, the situation is important. I take my information of the coast from what I have read, not from my own observation, and I conclude from what I have seen, and the soundings, that there is more what is called foul ground off Granton than there is to the eastward; but for steam packets, I have stated I do not think this is important from the comparatively small distance between the two points, measured from their moorings.

690. Are the Committee to understand that you are speaking merely of the question of a jetty for landing passengers from steam-boats, and not the question of a harbour?—The jetty that I propose would partially form a harbour, as the cross-head I have drawn would shelter vessels from northerly winds.

691. Do you conceive that a jetty, such as that you have described, would answer all the purpose of the town of Edinburgh with regard to commerce?—No, I do not; I think that in addition to that, if there were a deep water dock that could receive heavy ships and enclose them within the dock gates, that would be an important improvement, which this alone would not give.

692. In short, you would construct a harbour besides?—Not a harbour, but a dock; it does not appear to me that the Forth, or that Edinburgh, is much in want of what I call a harbour for refuge, or haven. The Forth of itself forms, as it appears to me, an excellent harbour, and unless it were in the case of loss of anchor and cables, or a vessel having sprung a leak, no vessel would leave the roads to take refuge in a harbour, with the chance of missing stays in entering it, and getting upon that which I should rather call a hazardous shore. I think one proof of this is the small extent of losses. I understand that for the last 30 years, and my informant was Mr. Ogilvie, than whom I believe there is not a more respectable man, nor one better acquainted with the port of Leith, that there has been only one loss of a vessel in the Frith of Forth.

693. Have you given to the Duke of Buccleugh any formal report of your survey?—I have not given it to him, because it is only this morning that I finished it; but his Grace is acquainted with the substance of my report, because I read the draft to him.

694. Have you formed any opinion upon any of the schemes that have been proposed, either for making a harbour at Trinity or for making a western entrance into the docks at Leith?—I formed a general opinion of them; but I should rather, unless the Committee pressed me, decline giving any detailed opinion of their respective merits in an engineering point of view, because if the general question be settled, it does not follow that the plans which I now have seen, as, for instance, the Trinity Dock Plan, may not have objections to it, in reference to the entrance or otherwise; but if that be considered from general reasons the best place to construct a harbour, it would not follow

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that the entrance, in the way it is laid down, would be the plan that should be adopted. I should almost say positively that it would not, for the parties would of course be disposed to follow advice, with regard to a better plan of entrance.

695. Is the opinion you have formed upon the subject the result of your having considered the localities and the circumstances, as far as you could wish to do, or is it an opinion formed with reference to the survey you were instructed to make, or with reference to private and individual or public interests? —I conceive that I have almost answered that question already. I have no hesitation in saying, that my opinion and my instructions were to consider what, under all circumstances, without regarding private property, I should consider best to be done to relieve the present wants of the trade of Edinburgh. My employer, as the Committee are aware, was the Duke of Buccleugh; but his instructions to me, being of the nature I have described, I felt that I best complied with them by taking as comprehensive a view of the question as I could.

696. Will you have the goodness to state your general opinion upon the feasibility of the plans that have been proposed?—My general opinion of the feasibility of the plans is this, that in the first place, they require a much larger outlay than, I think, it would be expedient, considering the state of the trade of Edinburgh, at once to undertake; that all the plans which contemplate improvements to the westward appear to me to be made apparently at the sacrifice of the present harbour, and partly at the sacrifice of the present property at Leith; that therefore it would be desirable, in reference to those interests, to endeavour, before the trade should be moved to the westward, and the centre of trade moved along with it, which I think would be the case, and before the expense of two harbour establishments and two harbours be undertaken, to try what could be done in improving the present harbour, and I think it probable that something beneficial might be done in that. Within the last 10 years, information upon which I can depend, states that the present harbour has been deepened three feet. The evil of the harbour, that which chokes up the present harbour and tends to prevent its deepening, is the movement of the sand from eastward to westward. It appears to me that the effect of the work which is doing at present by Captain Dall, but doing slowly, is to prevent the sands, which are now to the eastward of Leith Harbour, from moving in the direction to the westward. I think that this work should be done upon a larger scale than hitherto, not only joining the present pier with the Martello Tower, but connecting it again with the rocks to the eastward, so as to prevent the passage of sand to the westward. If three feet of depth could be had by this means, in addition to the present depth, it would give 19 feet 6 inches at the high water of ordinary spring tides. With very heavy ships at neap tides this addition of three feet might not be sufficient. In such a case I do not see that there would be any danger or difficulty in any vessel coming alongside the deep water pier and lightening her cargo, so as to be able to enter the harbour, if the entrance could be improved so as to have three feet additional depth. It would also be a consideration whether an alteration would not require to be made in the present lock, so as to increase the depth and width of it, to render it fit for the entrance of steam packets. If that were done, I think that with that depth of water Edinburgh would be well accommodated as to its port for many years; but I think that making a harbour to the westward would not get rid of the difficulties that at present exist more than merely extending the pier in the direction I have stated, because if the harbour had 10 feet water in it, the large steam vessels draw 14, and those vessels would not remain in the new harbour, they would still go off to the roads, and if a new harbour were made, not only the property in Leith would suffer, but also the old harbour would be, to say the least of it, partially neglected, because there would be comparatively deep water in the new harbour. Then I quite agree that that additional depth I have described could not be maintained without dredging; but it seems agreed that in order to get deep water in the proposed harbour to the westward (I refer particularly to Mr. Cubitt's plan), dredging would be required; and I doubt whether more dredging might not be required in the harbour and at this proposed entrance than would be required for the additional depth that I have supposed the old harbour to be capable of being made to. In giving this opinion I wish to be understood as saying, that I think it is worth a trial before the property, which is very large

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in Leith, is reduced in value by moving the harbour to the westward. I still think, however, that if the facilities I have now stated increase the trade of Edinburgh very much, it may become a question whether works to the west may not be desirable to be done; but I do think that if this be the case, it will be also desirable to consider whether the plan of the late Mr. Rennie, who proposed not a harbour there but a dock, might not upon the whole be the preferable one, because it is well known that a heavy merchantman drawing 16 feet water would not remain in a harbour which has only 10 feet water in it, she would endeavour at high water to get within the dock gates. Then if I extend my view further to the westward, there is the plan, here called the Trinity Plan, which, as it regards docks, and as it regards the harbour, seems to embrace the whole question, both of additional depth and accommodation for steamers. Not referring to the particular plan, because I do not think the party should be committed to that, of course if that were done the trade would be fully accommodated at all points; but that would be done at a very enormous expense, and a depreciation of present property.

697. Do you conceive that the plan you have described to the Committee for keeping the present harbour of Leith more clear of sand, would be attended with very great expense?—I do not think it would, if the works I have described from the end of the present pier to the rocks to the eastward of the present harbour were completed.

698. Would not the completion of those works in itself be a very expensive undertaking?—No.

699. What would be the expense of that extension of the eastern pier, as compared with the expense of any of the proposed plans?—I do not mean an extension of the pier, but an extension of the weir or the jetty, for the purpose of preventing the sands moving to the westward to fill up the present harbour.

700. How far would it be necessary to carry it out?—There might be about 2,000 feet of it altogether.

701. Would you consider it necessary to extend that as far as the Martello Tower?—Yes, and beyond that; but the expense of that would be comparatively trifling, perhaps a few thousand pounds would do it all; it would be merely a sloping rubble weir.

702. Do you recollect Mr. Crighton's plan for the same purpose in 1822?—I recollect that I saw it, but I do not recollect the details of it.

703. Did you report upon that plan?—I did, but I forget what the report is.

704. Can you at present state whether that report was favourable or unfavourable?—I think it was generally favourable. I would say, without knowing whether that report corresponds or is adverse to what I have now said, that the experience of the last ten years proves that a great deal may be done; and I may have made reports before this time which have been mistaken, but I do not think there was any thing in the hurried report I then made adverse to the opinion I have now given.

705. Will you have the goodness to read to the Committee that portion of the report you have prepared for the Duke of Buccleugh which relates to the improvement you would propose for the accommodation of the trade at Leith?—Yes; it is as follows:—"Such then are some of the facts as respects the accommodation for the trade of all the world with Edinburgh and the district of which it is the port; and whatever difference might exist as to the nature and extent of improvement, it seemed, I may say, universally agreed, that some increase of accommodation, particularly for large steam-vessels, is indispensable. You* and the parties generally who take an interest in the question, know the various plans of docks and harbours that have been proposed, it cannot be useful to extend this report by the detail of them, nor by their particular merits, or otherwise, in an engineering point of view. Great pains have evidently been taken by the different engineers in the preparation of plans, and with the reports and estimates which accompany them. The chief question in reference to extended accommodation seems to be, whether the addition should be made to the present harbour and docks, or separate from them, at some point where the deep water approaches nearer the shore. The main argument in favour of the former plan is, that it will uphold or increase the value of the present docks, warehouses and property in Leith, but that a deep water harbour or pier in any other place would produce the contrary effect, by affording better public accommodation than the present.

* This report is addressed to Solicitors.

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A long experiment, founded on this very argument as the basis of proceeding, has been made, and the results of it are now to be seen. There has been great outlay, which has proved unprofitable; hence a heavy debt; but still the accommodation insufficient, the charges high, the monopoly continued, and the effect of all these evils is the depressed state of the port, and of the trade of the district that has been described.——Is any important change likely to take place by the proposed plan of a new harbour, with an entrance to the present docks from the westward, and is this, under present circumstances, the most adviseable plan for immediate adoption?—I would observe, in the first place, that in all the plans now suggested, the idea of improving the present entrance seems almost to be forgotten, and that of a new entrance from the west into deeper water substituted. This plan was proposed by the late Mr. Rennie; modifications of it have since been suggested by Mr. Cubitt and Mr. Anderson; the general argument applies to all of them. I think it will be agreed, even by the engineers and patrons of this scheme, that, but for the supporting of the present property and system, none of the plans would have been recommended; that another situation would have been preferred, where the deep water is nearer the shore, so that much of the artificial excavation and the future expense of dredging would be saved, and where, probably, the charges would be lower than could be afforded. Were 150,000*l.* or perhaps 200,000*l.* added to the present debt, I much question the policy of this almost forced measure upon the interests the protection of which is its avowed object. That a heavy addition will be made to the already large debt is certain, unless indeed the debt be considered as gift or grant, which, from what I have lately seen in another more national harbour business,* there is little chance of.——Will the additional rates pay more than the interest of this, after deducting the expense of maintaining the depth at the entrance and in the basin and other charges?—If there be a doubt it deserves consideration. Mr. Cubitt's plan goes only to nine or ten feet water at the site of the entrance; the addition is to be obtained by dredging; and to support it, and the artificial depth in the harbour, without great expense, is, to say the least, problematical. The late Mr. Rennie planned a dock on the west of the present one, but I have not been able to obtain a copy of his report, and, therefore, cannot state positively what he proposed as the depth at the western termination, unless by judging from the present depth at the site of his entrance, which is, I see, only three feet under low water; and this leads me to doubt if Mr. Rennie contemplated the capability of making and preserving so great a depth as Mr. Cubitt has supposed: steam-vessels not being in use at the time, depth at low water was, to be sure, less necessary than at present. The apprehension entertained as to Leith is, that a new or rival scheme would injure their trade; the calculations are founded upon a certain tonnage being to be loaded or unloaded; and that whatever is taken to another harbour is *pro tanto* a deduction from them, and, therefore, injurious to the property in Leith, and to the security of the money advanced by the Treasury. This principle it must, I think, be admitted offers but indifferent security for any further loan; but, besides this, the argument is opposed to the general interests of the port and the accommodation of trade; for it will be allowed, I presume, that these would be promoted by any convenience for landing, even if it had not the advantage of lower rates; if lower, so much the better. I would take an extreme case, and suppose what the public would like best, viz. an additional pier or harbour, with lower rates. It by no means follows conclusively that the trade, or even the revenue of Leith, would be diminished in the way that has been supposed.——Might not the accommodation and the low rates so increase the trade and the shipping as to produce a contrary effect? —When Brindley was asked in the House of Lords, what chance the Duke of Bridgewater had of being compensated for his outlay, when the whole of the river trade to Manchester would not pay the interest of the estimated cost of the proposed canal; he replied that he expected the canal would make its own trade: the result has justified his foresight, and every new conveyance since has also created a trade for itself; the last was the Liverpool and Manchester Railway, which, it is well known, was strenuously opposed by all the canals, and yet each canal now carries more goods than before the railway was opened! To descend to a smaller scale of illustration, it is generally said that the owners of stage coaches in London make larger profits now that opposition has obliged them to convert their coaches into omnibuses, and to charge half or a third of the

* Dover.

the old fares, than when the monopoly existed. The very small number of vessels in Leith Harbour, when I was there, looked very like the slow-coach system; and I have no doubt of a great increase by good accommodation and a lower and simpler scale of rates. I have been told that Baltic and other goods are taken to Grangemouth, thence conveyed to Lock No. 16, on the Forth and Clyde Canal, and carried back to Edinburgh by the Union Canal at a lower rate than if they had been landed at Leith: a deep-water pier also, below Grangemouth, is spoken of, which, if executed, will tend to increase the accommodation for heavy vessels there. The communication from the Clyde to Edinburgh, already great, is on the increase, and the intercourse by canals has been improving more rapidly since an Edinburgh and Glasgow Railway was projected. I am informed also, that to avoid the rates, cargoes from small vessels are sometimes landed below the commissioners' boundary with risk and inconvenience. Notwithstanding these facts, my opinion is, that injury may be done by attempting too much in too great a hurry, that it will be well to proceed by degrees, but that time should not be lost before something is done, and that the first thing wanted is a pier in deep water to which heavy steamers may come at all times of tide, and having landed their passengers and cargoes go off to the roads to come alongside again to reload. Heavy vessels might also lighten at the pier so as to be able to enter the dock: I would propose a T shape, and for economy, expedition and the avoidance of an objectionable interference with the tide so as to cause deposit, would recommend the work to be of cast-iron piles or timber coppered under low water; and the framing of the deeper part from the shore outwards to be left open at first for the free current of the tide, the cross-head being filled in with rubble stone to nearly the high-water level so as to form a breakwater. If the cross-head be so filled up or even built of stone, the objection to causing deposit will not apply as it does in the direction of the tide. The principal reason for the construction I have described is economy, and that vessels lie better alongside an erection of this kind than a solid stone pier is proved by experience. The pier and head are supposed to be not less than 35 feet wide, and the head 1,000 feet long, the latter being all in deep water; say 12 to 14 feet at ordinary spring tides. In moderate weather steamers might lie on each side; and there is space for four of the largest class on each side of the head, from which, towards the shore, there is a length of 1,500 feet, having from four to fourteen feet of water. Cranes will be fixed for the quick unloading of the steamers, and one or two powerful ones for the engines and boilers. An opening near the head, with a bridge, would enable vessels to pass to either side of the pier in case of a sudden shift of wind, without going round the head. A shed warehouse will also be required for passengers' luggage and goods by the steamers, or to or from vessels, as the object will be to unload as much as possible when they are afloat. The communication with the opposite coast would be materially improved; passengers might land at the pier at all times of tide, and with a proper landing-place on the opposite side, the convenience for the crossing of carriages and horses, by saving distance, would be very great. In case of the present points on the Fifeshire side being found insufficient for the landing and shipping of carriages, I am informed there are excellent situations with deep water close to the shore at Hawk Craig to the eastward of Aberdour House, which is nearly opposite to Granton. I have heard and read various statements of the advantages and disadvantages of Trinity, Newhaven and Granton, as the site for an improvement. The two former are nearer the centre of movement in Edinburgh than Granton; which, again, is nearest the deep water, and less exposed to silt up. I have had soundings taken, which prove Messrs. Stevenson's correctness in this; and their statements to me have throughout been confirmed by the facts. Granton is nearer the islands higher up the Forth; but as comparative danger on that account appears to me out of the question, it had better not have been named, and the distance between Trinity and Granton is not such as to make the superiority of the roads or mooring ground in front of the former, supposing them to be so, of much consequence to steam-vessels. Granton being westward of Wardie Burn is beyond the limit of the corporation rates, and therefore exempt from them. I conceive this to be, perhaps, the most decided argument in its favour, for it will exempt the steam-vessels from part of their present rates. In the accompanying plan the various designs by different engineers are shown, and

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also the pier now proposed by me; if erected at Granton from the Ox Craig, and (in dotted lines) if at Newhaven, being an extension of the present pier. The works described would cost from 50,000 *l.* to 60,000 *l.* which is about half what the same size of pier would cost if in solid masonry. It would be done in less time than any other plan, and give effectual relief to the steam trade. The Duke of Buccleuch might be remunerated by a small tax on passengers and goods landed at the pier, and bringing his Granton estate into play, and with a moderate outlay, the convenience would, I apprehend, be such as to yield a fair return; but I have not materials for a calculation of this. Should his Grace consent to the measure, the heavy outlay by Government, or the City, would be unnecessary, for the present at least. The effect of the better accommodation upon trade would be proved, and a judgment could be formed of the expediency of further works, whether by the Dock Commissioners or his Grace, while what I have proposed would not be in the way, but would form part of any extension.——Will the Leith interests object to this plan, as taking the trade from them?—I think they ought not. It is forced work to take large steamers into the harbour, and but for the Shipping Company having smacks and buildings in the harbour, probably their steam vessels would remain in the roads notwithstanding all the inconveniences. It should also be considered, if this would affect the property, particularly towards the harbour and eastward, so much as a new harbour opening from the west, and carrying the trade generally in that direction, and if the new entrance might not tend to the neglect of the old one in its present state, and to comparative indifference as to its further improvement. To say the least, there would be two interests, and the expense of two harbour establishments.——Again, is the hope of further improvement of the present harbour desperate?—It is allowed to have been deepened three feet within the last ten years by means of dredging and other means. A further addition of three feet would be a most important improvement; but I do not think that such a depth if made would be maintained without occasional dredging; but it is admitted that this will also be necessary to preserve the depth proposed by Mr. Cubitt at the western entrance. That the general movement of the sand is westward, seems proved by the relative level on the east and west side of any pier or projection. Newhaven pier was built about 15 years before Messrs. Dall and Leslie's soundings, and these show a difference of from 18 inches to two feet between the two sides. It is desirable, therefore, to keep the sands on the east of Leith Harbour from getting to the westward into the entrance, and a causeway is now being carried out from the pier-head to the Martello Tower. To effect this object it will tend to lessen the expense of dredging, and should the breakwater proposed by Mr. Cubitt be made, this will be the more necessary, as the effect of that breakwater, extending out as intended, will rather be to stop any sand moving to the westward which will rise on the east side, and tend to increase the expense of dredging at the entrance of the harbour. After a consideration as full and impartial as I have been able to give the subject, and being fully aware from my own conversations with the Duke of Buccleuch that his Grace's feelings are the same as you described to me, I really can see no way in which a remedy to the present defects can be applied so economically, so expeditiously and with so little interference with existing interests and rights as the measures I have stated. Whether the Duke will agree to such a work must depend on his Grace; but I feel assured from what I have seen, that an expression of a wish on the part of the City of Edinburgh would have weight, and that it would be to the benefit of the inhabitants of that city and the district round it, I have no doubt. It might, perhaps, be difficult to convince the Commissioners or the City creditors that the effect of reducing and simplifying and equalizing the rates would improve their revenue; but this is evidently required along with the work I have proposed, whether executed at Granton or at Newhaven, to give fair play to the trade of the port. That an increase of trade would be the consequence there is no doubt, and even in point of immediate revenue I think the experiment worth trying."

706. Could such a dry harbour as you propose be added to the eastern pier?—I think if added to the eastern pier it would extend the distance from the shore too far.

707. There would be no communication for horses and carriages to the shore?—No, I do not think that would be a good measure.

708. But

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708. But there might be a communication for horses and carriages, supposing such a pier placed near Newhaven, where you have drawn this?—Yes.

709. Can you state what would be the expense of such a harbour at Trinity as is proposed, or what would be necessary to make a complete harbour there?—I have already said I have a great objection to give guess estimates; but the expense would be very heavy. If the simple work I have proposed amounts to 50,000*l.* or 60,000*l.* the Committee must be aware that the large and expensive works proposed at Trinity would amount to a very enormous sum.

710. Would it be three or four or five times as much?—Certainly more than either; I should say more than six times as much.

711. Have you seen the engineer's estimate for that harbour?—I have seen it; but, like my own report in 1822, I forget it.

712. Do you apprehend that if the works proposed at Trinity were erected, there would be any fear that those works would injure the entrance into Leith Harbour by throwing the sand back into Leith Harbour?—Yes, I think that would be the tendency.

713. Have you seen the estimate for the works at Trinity?—I have seen Messrs. Grainger & Miller's report.

714. Have you studied it sufficiently to give an opinion whether you consider that estimate fairly stated, the amount of that being 180,000*l.*?—I should say off hand that it is quite insufficient for the work.

715. Do you think it might require from 300,000*l.* to 400,000*l.*?—Not less.

716. Are you acquainted with Mr. Gibb as an engineer?—Yes, very well.

717. From your knowledge of him, do not you consider that he is a person likely to form a competent judgment as to what such a building would cost?—Yes; he is a man of great experience; I did not hear his evidence as to estimate, but if he said a smaller sum than I have now named, I should, as an off-hand opinion, say he is quite mistaken.

718. You have suggested some improvements that you think might be sufficient for the purposes of the trade with reference to the eastern entrance of the present Leith Harbour; have you formed any opinion of what those improvements if carried into effect would cost?—I have already said that I have not, but I have also said that the sum would be comparatively trifling; I should say that a few thousand pounds would do all that is required there to make a connexion between the present pier and the rocks in the way I have described.

719. Of course that would be a very different operation from what has been proposed by Mr. Cubitt's plan?—Yes; this would not be a breakwater, it would be merely a low weir or stop-sand.

720. It would merely stop the sand coming from the eastward, and it would have no effect upon the sand to the westward of the water of Leith?—No.

721. Consequently all that you would expect from that alteration would be stopping the sand coming from the eastward, and the sand from the westward would still be in a situation to obstruct the channel as much as at present?—I do not think that the present silting up of the entrance is by sand from the westward, but from the sand from the eastward, and that if the sand from the eastward were prevented travelling to fill up the entrance, I do not think the sand from the westward would prejudice it. Honourable Members who have been upon the coast have seen the effect of carrying out jetties upon the coast for stopping the sand, and that the effect is generally upon the opposite side to deepen the sand rather than to raise it.

722. Are you aware, that since the works have been constructed to prevent the sand coming to the westward, a considerable bank has been formed by sand going to the eastward?—No, my information is to the contrary; viz., that the effect of what has been done already by extending the weir outwards has been to decrease the sand to the westward, and that it is now more in shore and less annoying to the harbour than it was previously. But there is a much better authority now in the room, the superintendent, Captain Dall; I put the question to him this morning, and he gave me the information I have now given to the Committee.

723. Are the Committee to understand, that supposing the improvement which you say might be effected at an outlay of some few thousand pounds was to take place, you would merely consider it an amelioration of the present harbour, without placing it in a state to accommodate all species of trade?—No, the depth would not be sufficient for that.

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724. And it would be requisite to construct other works for that purpose?—If, along with that, the pier I have proposed were constructed, all descriptions of ships could be accommodated, not so completely as if a deep water entrance were made, and a dock which would take in the ships at all times, because evidently the deeper the entrance and the deeper the docks the better.

725. Consequently, if this alteration were to take place, and a T pier was constructed, do you consider that it would be sufficient?—For the present I do. In the report I have read, I have recommended that which, with reference to all parties, I think would be sufficient at present, and would remedy the present inconvenience.

726. Are you aware that Mr. Telford formerly proposed a pier of a similar shape at Newhaven?—No; but if he did, I think it was a very good recommendation.

727. With reference to the pier which you have stated might be constructed either at Granton or as a continuation to the stone pier at Newhaven, do you consider that such a pier would afford shelter to vessels with the wind either blowing from the north-east or north-west?—I have already said that it would afford a vessel shelter, but not a complete one; but I have stated that I do not consider a harbour of refuge to be much an object in the Frith of Forth; I think the anchorage is good in the roads, and there are many wants to be supplied before you should think of forming a deep-water harbour as a harbour of refuge, for I do not think that once in twelve months in a strong gale of wind a vessel would run into an artificial harbour formed in the Forth when she had the roads to anchor in. There is Inchkeith, the two sides of it; there is the Bay of Inverkeithing; there is the Hope above Queen's Ferry; all of them affording excellent convenience for ships in the roadstead, and a vessel never would attempt to get into a harbour with the danger of missing stays if she could lie off in the roads.

728. You suppose that vessels coming within this T pier would come in for the purpose of lightening; suppose a vessel was to come to either of those piers constructed in the form you have proposed, and a gale of wind came on from the north-east with a heavy sea, what would be the situation of the vessel?—I think the pier-head would shelter her partially.

729. With the wind at north-east or east-north-east?—Yes. I have supposed the pier-head 1,000 feet in length, and I think the effect of that T head would be to increase the depth of water on each side of it. It would be like a vessel moored in the river, which increases the current round her, and rather tends to increase the depth.

730. Do you consider that a pier constructed of this T shape would be likely to deepen the water at the head?—Yes, on each side of it, close to it. I say that from experience; it is not a matter of theory. I do not mean to say that, as regards shelter, a vessel with a north-east wind on the leeward side of that pier-head would be so completely sheltered as if she were inside this harbour, which Messrs. Grainger & Miller have proposed; but I must say that I think it would be an extremely difficult thing for any vessel to enter that harbour in such a situation in a gale of wind. I have, however, already added that I hope the particular formation of this entrance will not affect the general question of the docks or the harbour being there, because no doubt the detail of the plan would be altered if the work were executed there.

731. Are the Committee to understand, that all that you consider would be required at present, with reference to the state of the trade at Leith, would be a deep water weir for the accommodation of the steam navigation, and an extension of the present pier to the Martello Tower, so as to increase the depth of the present eastern entrance?—Yes, all present circumstances considered, and dredging the present entrance, which would be required to give additional depth, I do not think the additional depth would be obtained without.

732. You are also of opinion that if hereafter the trade should be considerably extended, it might become necessary to have a deep water entrance, at which heavy merchantmen might get into the docks and lie afloat at all times?—Yes.

733. If your T pier was built according to one of the plans near the present site of the pier at Newhaven, could that be made serviceable if hereafter any entrance to the Leith Docks should be made communicating to the westward?—Yes;

Yes; but it would be more in the way than if it were at Granton. If Mr. Cubitt's plan were carried into effect for the purpose that is proposed, by his plan the probability is that this T pier erected at Trinity would be rather in the way. If, again, it were taken for the purpose that Mr. Rennie intended it, I think it would be useful without being in the way.

734. Do you think the work might be constructed in such a manner as to be serviceable in the event of that being done?—Yes, no doubt about it.

735. Suppose a harbour made at Trinity, the present harbour subsisting at Leith, with such improvements as you have suggested, by prolonging the pier, in your opinion there would not be sufficient trade to support the necessary expense of Trinity Harbour?—If I can judge from the present trade, I should say no; but I have no doubt that increased accommodation would cause additional trade, but still I think it would be much too large for any trade that I anticipate for many years.

736. Do you suppose it practicable to make a wet-dock capable of holding 110 sail of ships, drawing 16 feet water at Trinity, without an enormous expense?—Certainly not.

737. Would it be possible to make it perfectly tight without masonry, so that the lock gates should always be tight with a gale of wind at north-east?—No; there is no way of doing it but by masonry.

738. Is it possible to construct a wet-dock without coffer-dams?—It is not possible to put a lock in the situation in which it is put here without coffer-dams, unless you go to an enormously still greater expense.

739. Will you state to the Committee whether from your knowledge of works of a similar description in Scotland, or from your having been employed in the construction of works of a similar description, you consider yourself perfectly competent to give an opinion of the stability of similar works upon such a coast as the coast of the Frith of Forth?—I have had a great deal of experience, and I do not suppose that the coast of Scotland is very different from England. It is well known to some honourable members here, that in works for the corporation of the Trinity House, and Dovor Harbour and Hull Harbour, and in fact many of the harbours round the coast, I have been very extensively employed; but the questions that have been put to me with regard to the mode of making this, I do not think require very extensive experience in regard to the mode of constructing the works.

740. The question refers to the nautical part of the question?—I have not pretended to any nautical knowledge.

741. As to the construction of the harbour at this particular point?—I have not answered any question upon that subject which I have not answered with some confidence that I am correct. If the question refers to getting ships into this harbour in a gale of wind, I think it requires very little nautical knowledge to know that that could not be done safely; and I have endeavoured to relieve that particular plan of that difficulty, by saying that it would probably be done in another way.

742. Then your opinion is, that according to that plan of Trinity, vessels could not go into it safely in a gale of wind?—Certainly not.

743. Is not this the only instance in the kingdom within the compass of your knowledge where it was necessary to build a breakwater outside the lock gates of a dock, in order to cover the approach from the danger of the sea?—It is the only time that I have seen the thing proposed in this way so as completely to mask the lock. I have been employed, and I have formed the last dock made at Hull, in the Humber, and we had there, outside of the walls, a basin to quiet the water for vessels entering the lock gates; but it is constructed differently from this, the opening to it being nearly in the line of the lock gates. It is not only the difficulty of working into this Trinity Harbour that I refer to, but that a vessel, if she were obliged to work in, must work in in shallow water.

744. You have stated that the T pier which you propose might be constructed with a head of 1,000 feet long, at an expense of about 50,000*l.* to 60,000*l.* You have stated also that you consider the estimate for the Trinity Harbour to be very much under-rated; now the proposed length of the head of the pier that you have mentioned is 1,000 feet; the length of the breakwater at Trinity is 1,200 feet, making a difference of 200 feet; the estimate for that 1,200 feet is 41,000*l.*, consequently it is very much under-estimated, for it would amount to about 80,000*l.* Therefore the 1,200 feet would occasion in the one case an

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expense of 80,000*l.*, and a part of your plan which is to cost only from 50,000*l.* to 60,000*l.*, would be within 200 feet as long as this is supposed to cost. Now is not there some difference in those estimates?—There is a difference evidently in estimating it. If this is estimated at 41,000*l.* I should apprehend, without knowing the particular way in which it is to be done, that a breakwater of rubble stone might be done for the money; that it is money enough for it. If it is rubble shot down, I should say it is plenty of money for it; but what I stated with regard to the expense of the work was, with reference to a part of the work to which this breakwater is as nothing, the construction of a water-tight dock of the large size of this dock, and the dock gates and the walls with it, which are a very different thing from merely a breakwater of rubble stone.

745. These works are estimated of course at the Scotch prices, are you aware what those prices are?—In the largest work that has been done in that country for many years, the Union Canal, I was the sole arbitrator in all the differences between the company and the contractor nearly from end to end, and therefore of course I had a good opportunity of knowing the cost of masonry from both sides.

746. Do you think a pier constructed of stones put down on their edge, and then secured by a puddled bank of clay, would be sufficient to make such a harbour as is proposed at Trinity water-tight?—Putting the stones down upon their edge would be a very bad plan; but with the assistance of the diving-bell, I think that a wall might be carried round to near the lock gates, and then by carrying what is called a puddled wall between the sea side and the dock side, the water might be kept in; but I think it would all require to be done by a diving-bell, particularly if it is to be a dock wall, alongside which ships are to lie to unload their cargoes.

747. Are you taking into your consideration that after the outer wall is constructed the inner area of the dock may be laid quite dry, and consequently the walls alongside of which the ships are to lie may be constructed with greater facility?—Yes; I will explain the only ways in which I think this could be done; it would be either by coffer-damming the whole of it, or by dredging the whole of the excavation out, including the area of the whole of the walls, and then having got a large surface of that depth down to the proper level, then I think that by means of the diving-bell the walls could be constructed and the puddle brought up behind, puddling also up to low water in the diving-bell; that would produce the effect of making the dock tight; but the expense of it would be enormous, and that is what I refer to as being the great expense of the work. This cross-head would not be expensive comparatively, because it would not require either to be done in a diving-bell or to be done with coffer-dams; it might be kept at such a distance as for the stones to be shot down in a slope, the same as the breakwater at Plymouth.

Charles Cunningham, Esq., called in; and Examined.

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748. WHAT situation do you hold connected with the corporation of Edinburgh?—I am senior town clerk of the city of Edinburgh.

749. How long have you held that situation?—I have been one of the joint town clerks of Edinburgh since the year 1806.

750. Are you well acquainted with the state of the finances of the corporation of Edinburgh, and with all the transactions which have taken place between them and the Government with respect to Leith Docks?—Yes, I am generally acquainted with them.

751. Will you state to the Committee the present condition of the finances of the corporation of Edinburgh?—The best form in which I can answer that question, which involves a statement of figures, is to produce an abstract view of the revenue and expenditure of the corporation of the city of Edinburgh, which will explain the situation in which they stand with regard to their debts and revenues and assets; it also shows the situation in which the debt due by them to the Government at present stands; and, in short, it contains a much better account of the nature of their property and their revenues than it is possible for me to give in any other way.

752. Have the goodness to give in that account to the Committee.

[*The Witness delivered in the same.*]

753. What part of the revenues of the city of Edinburgh is derived from the

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the port of Leith?—The city of Edinburgh derives from the port of Leith a revenue under the general name of Shore dues, and a separate revenue under the name of Dock rates. In the Appendix to the Paper which I have given in will be found abstract states of the free produce of the revenues of Leith. These contain all the information which it is in my power to afford to the Committee.

754. What is the sum total of those revenues of Leith which belong to the corporation of Edinburgh?—The amount of the annual free produce of the revenues of Leith in the year 1833 to 1834 was 14,816*l.* 9*s.* 10*d.*

755. Are those revenues mortgaged to the Government?—They are.

756. Will you give those revenues in detail?—The first is dock duties for the year ending Whitsuntide 1834, producing net 7,894*l.* 3*s.* 11*d.*; the next is shore dues for the year from the 14th of September 1833 to the 13th of September 1834, free produce, 5,208*l.* 4*s.* 8*d.*; then there are separate dues, under the name of berthage and flag dues, 674*l.* 1*s.* 3*d.*; there is a duty called pontage, 1,040*l.*; all these added together will amount to 14,816*l.* 9*s.* 10*d.*

757. Is there included in these sums what was received from the Consolidated Fund for foreign ships?—I have no doubt that there is; it forms a part of the general revenue.

758. Are the shore dues part of the security given to Government?—They are altogether made over to Government in the security of the loan.

759. Are the whole of the revenues of the city of Edinburgh given to Government?—Not the whole of the revenues; but the whole of the revenues derived from the port of Leith.

760. Is not the city of Edinburgh at this moment in a state of bankruptcy?—It is.

761. How long has that been the case?—In August 1833 a Bill was passed in Parliament appointing trustees for the creditors of the city, by which their affairs were declared in a bankrupt state on the 1st of June 1833.

762. Under that Act of Parliament has the Government a preferable claim upon all the property of the Town Council of Edinburgh, or is it limited to the income they derive from the duties at Leith?—The Government has a preferable claim upon the whole duties which the city of Edinburgh derives from Leith, both shore dues and dock rates.

763. Has not it a collateral security upon the other property of the corporation of Edinburgh *pari passu* with the other creditors?—No, I think not.

764. Will you state the time when, and the circumstances under which this advance was made by the Government to the Town Council of Edinburgh for which the Leith dues were mortgaged?—The advance was made by the Government to the town of Edinburgh, under the authority of an Act passed in the 6th of Geo. IV. c. 103.

765. Was that the first advance of the Government?—No, it was not; the first advance was about the year 1799 or 1800, when the Government advanced 25,000*l.*; subsequently they advanced other 25,000*l.*; the first 25,000*l.* was paid off, and in addition to the sum advanced by this Act of the 6th of Geo. IV. there still remained the second 25,000*l.* of debt due by the town of Edinburgh to the Government. By this Act of the 6th of Geo. IV. the sum to be advanced was 240,000*l.*, and the sum previously advanced was 25,000*l.*, so that the total debt at first was 265,000*l.*

766. Will you state whether any other transactions had been in contemplation with regard to the Leith Docks in the year 1825, which led to this advance of money?—In the year 1825 the magistrates of Edinburgh, in the view of relieving themselves from the great responsibility which they had incurred by borrowing money to carry on the works at Leith, turned their attention to the formation of a Joint Stock Company. A Bill was brought into Parliament for that purpose, which was defeated by an opposition from certain parties in Leith, in consequence of which the Government at the time saw it necessary to step forward to afford some assistance to the town of Edinburgh, and that assistance was given under the authority of this Act of the 6th of Geo. IV.

767. Previous to that date, had the greater part of the debt been borrowed from private parties?—From the banks and banking companies, and from private parties.

768. Was this advance specifically connected with the improvements of the port of Leith?—The money had been previously all borrowed and expended,

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and this advance made by Government, as the Act directs, was applied to the taking up of the securities already in existence.

769. What were the terms upon which this money was borrowed?—The terms were to pay interest at three per cent., with a sinking fund at two per cent., making in all five per cent.

770. Do you know whether at the time this loan was made, the revenue of the Leith dues was sufficient to pay the interest, and two per cent. for the sinking fund?—The dock rates were not sufficient; but the collateral rates of the shore and harbour were more than sufficient. These are now pledged to Government under the authority of the Act which passed, constituting the trustees for the creditors of the city, and they are more than sufficient for paying the annuity to Government.

771. What is the amount of the interest and the sinking fund you have at present to pay for the Government debt?—The interest and sinking fund at present payable is 10,350*l.*

772. What is the total revenue?—£. 14,816, leaving a surplus for the city or for its creditors to the amount of 4,466*l.* 9*s.* 10*d.*; but there is an additional one per cent. The sinking fund was kept at one per cent. only for a number of years, in consequence of the town of Edinburgh expending 28,000*l.* upon the extension of the eastern pier at Leith, and after that period expires, that additional one per cent. comes into operation, which will be in 1839; so that, supposing the revenue to amount to the same sum that it does now in 1839, the annuity and sinking fund in that year will be 12,750*l.*, and there will still remain a surplus to the city of Edinburgh of 2,066*l.*

773. Were there any other conditions stipulated for on the part of the public when this arrangement was made?—Yes; the town of Edinburgh was to give up a portion of the docks to the Commissioners of the Navy, which has accordingly been done, and they are now in possession of it; that is specially provided for by the Act itself.

774. Was there any subsequent alteration made in that stipulation by any Act of Parliament?—I am not aware of any; the Government was put in possession of the premises, and they still remain in possession.

775. Will you state to the Committee whether the debt of the corporation of Edinburgh to the Government has been at all diminished by means of the sinking fund, and whether the interest of that debt has been regularly paid?—The debt has been diminished to a certain extent by means of the sinking fund; it has been diminished about 21,000*l.*, or thereabouts.

776. Has the interest always been paid?—It has, except that it fell a little in arrear before the Act passed constituting trustees for the creditors of the city; there is at this moment a year's interest and sinking fund in arrear, but which will be made up by the surplus revenue before that can be applied to any other purpose whatever.

777. You are aware that there is a duty called the merk per ton on goods imported at Leith; have you any account of that?—I have an account of it for the year, in which I have stated the amount of the shore dues. The amount of merk per ton payable to the clergy in the year from the 14th of September 1833 to the 13th of September 1834, was 3,694*l.* 14*s.* 1*d.*

778. Was that more or less than it was the former year?—I think it must be very nearly about the same; it bears a proportion to the shore dues of about two-fifths.

779. Is that tax levied on goods passing through Leith for Glasgow, Stirling and Kirkaldy, and other places, as well as those consumed in Edinburgh?—It is levied on all goods landed in the port of Leith.

780. Is it levied according to the bulk of the goods?—In some instances it is tonnage of weight, and in others tonnage of bulk, but I have no practical knowledge of the mode of levying it.

781. Is that a preferable claim, and quite exclusive of the revenue you before stated?—It is exclusive of the sum stated before as shore dues; it belongs exclusively to the clergy of the city of Edinburgh, and it was found to belong to them by a judgment of the supreme court; it is a separate duty, levied for their support entirely, by Act of Parliament.

782. That is not a duty that the corporation of Edinburgh have any power of diminishing or doing away with?—They have the power of diminishing it in common with the shore dues. There is an Act of Parliament that gives them the

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the power, with the consent of the Treasury, of diminishing the rates and shore dues, and the merk per ton goes along with the shore dues.

783. Can they raise the dues?—They can raise them so far as they have abated them, but not beyond that limit.

784. Will you state what power they have with reference to the merk per ton?—By an Act passed in the 28th of George III. cap. 58. sec. 25, there is this provision: "Be it therefore enacted, by the authority aforesaid, that the said lord provost, magistrates and council, and their successors in office, shall have full power, and they are hereby authorized from time to time, during pleasure, to give such abatement of the aforesaid shore dues and merk per ton on such kinds of goods as they shall think proper, and even wholly to free certain articles for the encouragement of trade to the said port of Leith, and to publish tables from time to time for collecting the said dues, and to alter the same at pleasure, so far as concerns such abatements or exemptions, and no further." Then, section 26, "Provided always, and be it enacted, that the advantage of such abatements or exemptions made or to be made shall be impartially given to all traders in the said articles resorting to the said port and harbour, and that a proportional abatement shall be given to non-freemen of the city of Edinburgh on every sort of goods for which any abatement is or shall be given to freemen of the said city." But that power is now controlled by a subsequent enactment, declaring that they shall not touch any of the shore dues without consent of the Lords of the Treasury.

785. And you conceive that equally to apply to the merk per ton as to the shore dues?—Yes.

786. In point of fact, have not the city of Edinburgh modified some of those dues, and the merk per ton within the last year?—They have.

787. To what extent?—I cannot state the exact extent; but it is very trifling in amount.

788. Have the dock rates been modified?—No.

789. Is the revenue derived from the merk per ton sufficient to pay the clergy of Edinburgh?—No; their chief fund of support is the annuity raised in the city of Edinburgh.

790. Have there been litigations between merchants and ship-owners of Leith and the town of Edinburgh on account of the charges on merchandize at Leith?—Yes, there have; there are at present questions depending between certain parties at Leith and the town of Edinburgh with regard to these charges.

791. How many years have they subsisted?—At least from six to eight years, perhaps more; not having any particular charge of the actions carried on, I cannot be very accurate.

792. Can you state the expense with which they have been attended?—I cannot.

793. Are you aware that in consequence of this merk per ton being levied on bulk, certain articles are not landed at Leith but either carried to the neighbourhood beyond the bounds of Leith or to Grangemouth?—No, I am not aware of that; I understand that the Committee have sent for a person from the Shore Dues Office at Leith, and he will be able to answer that question.

794. Do you know whether it is generally supposed by the merchants at Edinburgh that the dues at Leith are so onerous as to be injurious to the trade?—I have heard it stated that they were so; but about the year 1828 the magistrates of Edinburgh were advised to institute an inquiry, and to make a comparison of the duties at Leith with Dundee and Aberdeen and Hull, and it turned out that there was no reason for the complaints against the dues at Leith as being larger in amount than the other places upon the coast.

795. Were all the revenues derived from the port of Leith previous to 1825 applied to the payment of the interest upon the debt, or were they in part applied to other purposes of the corporation?—All the dock revenues were applied in payment of the interest of the debt; the harbour duties were supposed to belong exclusively to the corporation, and the surplus of these they applied to their general purposes.

796. Are you in possession of a copy of a report made by the town clerk to the town council of Edinburgh about August 1816, as to the application of certain charges at Leith then levied in the name of fees to the shore master?—

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I am not in possession of any copy of that report; I am aware that there was such a report, and it will be found in the records of the town council.

797. Could you procure a copy of that for the Committee?—Most certainly.

798. Will you point out to the Committee the boundary of Leith Harbour and docks, and over what part of the harbour the securities of His Majesty's Government extend?—The bounds of the Harbour of Leith extend from a point at Seafield toll-bar, on the eastward of Leith, to Wardie Brow, or Brae, to the westward of Newhaven.

799. You conceive the whole shore between those two points belongs to the corporation?—Yes; it is within the Harbours of Leith and Newhaven.

800. Then if this proposed Harbour of Trinity were constructed, you conceive that the corporation of Edinburgh would have a claim to the shore dues of any thing landed in that harbour?—I do; the fact has been already found by the Court of Session in Scotland.

801. Is not that right a subject of litigation at present?—No; I think they levy dues at the chain pier for whatever is landed there; at all events, I am certain that there was a decided case to that effect; here is a report of cases decided in the Court of Session, Shaw and Dunlop's decision, vol. 5, page 267, where Lord Mackenzie, the Ordinary, found in express terms that the new chain pier at Trinity is within the limits of the port of Newhaven, and that the Act of Council, giving permission to erect that pier, is so qualified that it cannot be held to imply a dereliction of the harbour dues to which the magistrates of Edinburgh have a right, from steam-boats landing passengers within the limits of that port.

802. Will you have the goodness to read the 39th section of the 7th of George IV., cap. 105, and state whether there is any thing in that Act contrary to what you have stated?—"And be it further enacted, that the mouth or entrance of the said Harbour of Leith shall be and be held to be within a straight line drawn from the northern extremity of the eastern pier, as far as it is or shall be extended in a northerly direction and the north-western point of the sea-wall of the said docks, until the pier authorized to be erected by the principal officers and commissioners of his Majesty's navy, by the said recited Act of the sixth year of the reign of his present Majesty, shall have been erected for the use of his Majesty's navy; and so soon as such pier shall be built at the naval yard to be constructed at the west end of the said docks, in manner mentioned in the said last recited Act, the mouth or entrance of the said Harbour of Leith shall be and be held to be within a straight line drawn from the northern extremity of the said eastern pier to the northern extremity of the western pier so to be built for the use of his Majesty's navy as aforesaid, and the whole space within such mouth or entrance shall be deemed and taken to be the Harbour of Leith." I do not think that limits in any degree what I have stated.

803. The Admiralty possesses some property at Leith?—The Admiralty possesses that part of the docks and shore ground given up under the authority of the 7th of George IV.

804. The Admiralty possesses some property at Newhaven?—They have property at Newhaven.

805. Was that purchased of the corporation?—No, it was not.

806. Are there different charters for Newhaven and Leith?—Yes.

807. Do they each describe the boundary?—They do.

808. Will you state the boundary?—Formerly the boundary of the harbour of Leith extended much further; in the charter of 1603, it extended from Edge Buckling Brae on the east, which was one of the boundaries of the county of Mid Lothian, to the water of Armand on the west, the whole of the coast of the county of Mid Lothian. The Harbour of Newhaven is described here as between St. Nicholas Church, which is north Leith, and Wardie Brae, which is to the westward of Newhaven.

809. Does Newhaven form parcel of the Harbour of Leith?—It does; it was originally granted as a separate harbour; but the Harbours of Leith and Newhaven are one and the same in point of fact.

810. Has not that impost of the merk per ton, which you have spoken of, which is applied to the payment of the clergy of Edinburgh, excited a degree of dissatisfaction, which has not been expressed with regard to the other port dues?—Of late it has.

811. What

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811. What have been the grounds of that dissatisfaction?—The general grounds have been, that the gentlemen of Leith assume it to be a duty paid by the trade of Leith, while again it is contended that the trade of Leith includes the consumption of Edinburgh, and that, in point of fact, it is a duty paid by the consumers.

812. Does any part of the revenue of the merk per ton go to pay the clergy of Leith?—No part of it.

813. Did not you state that that was levied on goods, although they went to Glasgow or any other place?—It is levied on all goods that come into the port, whether they are for the consumption of the place, or *in transitu*.

814. Then it is not confined to goods that go to Edinburgh?—Of course it is not.

815. When that duty was first imposed, was not the population of Leith very inconsiderable?—I should think so.

816. Is it the usual way to pay the clergymen in Scotland by levying port dues?—I do not know any other instance of it.

817. At what time was that tax first imposed for the maintenance of the clergy of Edinburgh?—The duty was first granted by King Charles I., in the year 1636; the first grant was only during pleasure; but in May 1636, it was declared to be perpetual; and in the year 1661, an Act passed in the Parliament of Scotland regulating the grant, and declaring it to be for the support and entertainment of the ministers of Edinburgh.

818. Can you state what was the amount of the merk per ton when it was granted by the Act of Charles I.?—I cannot; I do not think I have any means of ascertaining it.

819. Can you state what it was in the reign of Charles II., when it was granted to the clergy?—I cannot.

820. Can you state what it was at the accession of George III.?—I have no doubt that can be done; but I have not the means of doing it.

821. Can you state what it was when the 28th of George III. was passed?—I have no doubt a statement of that can be procured.

822. In the present state of the finances of the corporation of Edinburgh, do you conceive that it would be possible for them to raise any considerable sum of money, either for the purpose of improving the present Harbour of Leith, or of opening a new entrance to the westward of the harbour?—I do not think they have the means at present of raising one sixpence of money in any shape whatever.

823. Are the seat rents of the churches of Edinburgh applied to the support of the clergy of Edinburgh?—They are not.

824. Is there a considerable sum levied for those seat rents?—They amount to a very considerable sum annually.

825. Can you state the amount?—About 5,000*l.* net, after paying all the expenses. The clergy laid claim to the seat rents of the churches in Edinburgh in the year 1810, and the Court of Session of Scotland found that their claim was not good, that the seat rents of the churches did not belong to them.

826. Did the clergy then claim that, in addition to the merk per ton and to the annuity tax?—They did.

827. They wished to have all three?—And more than the three; there were various other funds that they claimed, but they were not found entitled to them.

828. What other funds?—They claimed the impost on wine, a fund belonging to the magistrates of Edinburgh, a burghal tax, and some other small funds.

829. In case the corporation of Edinburgh were able to raise money for the purpose of improving the present harbour or opening a new entrance, are you able to state whether they would wish to execute either of those objects?—I think they would be desirous to execute any work that would be found to be useful at Leith, and which the present state of the trade of the port requires.

830. Are you of opinion that the present state of the port is very insufficient to meet the wants of the commerce?—I hear that it is very insufficient, and I believe that to be the general impression, particularly as regards steam-vessels; that there is no accommodation for the larger class of steam-vessels to come to a pier to land and embark the passengers.

831. But you do not consider that there is any probability of the city being

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possessed of funds adequate to such an object?—I cannot see where they are to come from.

832. Do you know whether there are great doubts entertained how far they will be able to pay their present creditors?—I know that very great doubts are entertained whether they will be able to pay their present creditors, and the creditors doubt whether they will be able to make their debts good, even if they were to get all that they claim from them. It is a subject of dispute at present what belongs to the creditors and what belongs to the city; the Act of Parliament draws a distinction, royal burghs have certain funds which are inalienable.

833. Has the interest upon the debt due to the private creditors been regularly paid up to this time?—Up to the period of the bankruptcy of the town it was regularly paid; it has not been since; a sum has been paid recently on account to the creditors.

834. Do you know what is the amount of the deficiency?—I cannot state that.

835. Then the creditors have an interest in the revenue of the Leith docks to the extent of the surplus beyond what the government is entitled to?—The creditors conceive that they have such an interest.

836. Do you consider the revenues under their charter to be inalienable, and not in the power of Parliament to take away?—What may be in the power of Parliament I cannot say. There are a great many of the original grants in favour of the burgh of Edinburgh, which they consider to be inalienable, but the property that they have acquired since by purchase they admit to be available for their creditors.

837. Do not you consider the Harbour Fund as applicable in the first place to the improvement of the harbour?—Certainly; every grant of harbour involves the maintaining of the harbour.

838. Do not the charters in favour of the town of Edinburgh declare that those funds are given for the improvement of the harbour?—I have no doubt that any corporation holding harbour rates must hold them in the first place as applicable to the maintenance of the harbour.

839. And the improvement of the harbour?—Perhaps there may be a limit to that.

840. But supposing the grant to say, that it is for the improvement of the harbour, would not you hold that the funds in that case levied were destined for the improvement of the harbour?—Most unquestionably, if the grant stated it to be so; and if it was not controlled by any subsequent use, I would maintain that it still continues so.

841. Did not the town of Edinburgh, within the last ten years, advance a sum of 28,000*l.* towards the improvement of the harbour?—They did.

842. Did any of that come out of the merk per ton?—Yes, the clergy did not contribute towards the grant to the amount of 12,000*l.* taken as a capital; they contributed by an arrangement so much per annum to make it fall upon their successors.

843. So that there is a deduction for a long period from the revenue, which the clergy of Edinburgh derive from the merk per ton, in order to pay their portion of that expense?—There is a deduction of 600*l.* a year ascertained by Act of Parliament, for the interest of the capital sum which they should have advanced.

844. The town of Edinburgh have never abandoned any right they had of harbour within the bounds you have described?—Not that I am aware of.

845. The Trinity pier was erected by their license; was an application made to them to that effect?—There was.

846. With respect to Newhaven pier, how was that done?—By arrangement with the ferry trustees and the magistrates, but there was an express application for a license to erect the chain pier at Trinity, and the magistrates conceived that it had been erected under the permission which they granted.

847. Have you a copy of that application?—I have.

848. With respect to the Newhaven pier, was not it understood that it was to be used by the boats and vessels and the King's ships, in order to supply them with provisions and stores, as a more convenient place of embarking and disembarking?—I am not aware of any arrangement that was come to upon that subject.

849. By

849. By whom was the application made to the town of Edinburgh for permission to erect the chain pier?—It was made on petition of the London, Leith and Edinburgh and Glasgow Shipping Company. C. Cunningham, Esq.

850. In what capacity did they apply to the city of Edinburgh for their permission?—They had been refused access to the pier at Newhaven by the ferry trustees, and they stated that it had occasioned serious loss and disappointment to them. 26 May 1835.

Veneris, 29° die Maii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Mr. *William Marshall*, called in; and Examined.

851. WHAT situation do you fill connected with the docks at Leith?—Clerk in the Shore Dues Office, where the revenues are collected. Mr. *W. Marshall*.

852. How long have you filled that situation?—Fifteen years. 29 May 1835.

853. Could you furnish the Committee with an account of the amount of dues received at the port of Leith during the last fifteen years?—I think I shall by Thursday next.

854. Can you state generally to the Committee whether the amount of those dues have been diminishing or increasing during the last 15 years?—They have varied considerably, but I cannot now state positively whether they have increased or diminished during that period.

855. There has been no considerable alteration?—I think not.

856. Are you an officer of the corporation of Edinburgh?—I am.

857. Will you state to the Committee the nature of the impost of the merk per ton?—It is a charge levied upon all goods not of the produce of Scotland, varying from 13½*d.* to 4½*d.*

858. Have you understood that complaints have been made of the nature of this impost?—It is generally considered both oppressive and injurious.

859. Has any alteration lately been made with respect to this tax?—An alteration was made last year, which would perhaps reduce it by 300*l.* or 400*l.* a year.

860. What was the nature of that alteration?—Upon various articles of import, tallow and bark and iron, and several others, the charge has been considerably reduced; formerly non-freemen paid a higher rate than freemen were charged with; the effect of the alteration was to equalize them, by reducing the rates paid by non-freemen to those charged to freemen.

861. Is the Committee to understand that the effect of this alteration has been to reduce the receipt of the duty of the merk per ton by 300*l.* or 400*l.* annually?—Yes.

862. Is the Committee to understand that no other alteration was made in the nature of this with respect to this impost except the one you have described, of doing away with the difference of freemen and non-freemen importing goods into Leith?—I think that is the extent of the alteration.

863. Can you give the Committee an exact copy of the official order directing those alterations?—I have not the official copy by me, it was an order of the town council.

864. Can you state what the merk per ton amounts to on twenty hundredweight on light articles, such as cotton and wool?—It is 13½*d.* per ton of eight barrels' bulk, on all goods not of Scotch produce, excepting when imported from London, Hull and Newcastle.

865. What are the charges from those ports?—I am not now prepared to say; that is a part of the revenue which is collected in another office, and I am less conversant with the details.

866. In what office?—In the Bulker's office.

867. Will you be able to furnish the Committee with a statement of that also?—I will.

868. Are you aware that, in consequence of the merk per ton, articles of inferior value are occasionally not brought to the port of Leith, as they would otherwise

Mr. *W. Marshall.*

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otherwise be, but landed on other parts of the coast, or carried to Grangemouth?—It may have induced a few vessels to proceed to Fisher Row, but I do not think it has ever obliged any vessel to go to Grangemouth.

869. Has any increase of rates been made in the dock dues within the last ten years?—In 1828, I think, the dock rates were increased one-third and the pontage rate one-half.

870. What additional burthen did this impose upon the trade?—The additional revenue might be from 2,000*l.* to 3,000*l.* a year.

871. Do you know whether that has been complained of by persons carrying on trade at Leith?—Yes, I have heard it complained of.

872. You are aware of the rates chargeable at Aberdeen or Dundee?—Yes.

873. Comparing the rates charged at Leith with those charged at Dundee and Aberdeen, is there any material difference?—Were we to adopt the Dundee rates we should collect about 500*l.* or 600*l.* a year less revenue than we at present collect by our own rates.

874. Do you mean that they are so much higher in absolute money?—Yes.

875. If you compare them as a per centage, how much more are they per cent. upon the value of the imports at Leith than they are at Dundee or Aberdeen?—The aggregate amount of the revenues collected in 1832 I believe was about 18,000*l.*; had the Dundee rates been adopted they would have produced 17,400*l.*

876. Do you know whether the revenue of Dundee has doubled in the last seven years?—I am not prepared to say just now.

877. Do you happen to know whether the rates leviable upon foreign ships at Leith are higher than they are at Liverpool, Dundee or Aberdeen?—The dock rates are much lower than at Liverpool, higher than at Dundee, and much higher than at Aberdeen upon ships from foreign ports.

878. Do you happen to have any authentic statement of the dues levied at Liverpool, Aberdeen and Dundee?—I could produce them on Monday.

[*The Witness was requested to furnish the same to the Committee.*]

Mr. *George Logan*, w. s., called in; and Examined.

Mr. *George Logan*, w. s.

879. YOU are a writer to the Signet at Edinburgh?—I am.

880. Have you taken charge of the proceedings of some of the public bodies at Edinburgh?—I have; I was several years a member of the Police Commission at Edinburgh, and I have been for some years, and still continue, a member of the Improvement Commission there.

881. Are you aware that much litigation has existed between the merchants and ship-owners of Leith and the corporation of Edinburgh, with regard to charges at that port?—I am, and have seen the proceedings in court.

882. For how many years have those existed?—They commenced seriously so far back as the year 1785, and have continued, with intervals, since that period; but they have been now in court, I think, since 1826, or thereabouts.

883. Are such proceedings attended with considerable expense to the parties?—Most unquestionably.

884. Can you describe the nature of the last process that has been going on since 1826?—The last process consisted of a conjunction of a number of actions that had previously existed; it now stands in that shape. It is now a conjoint process of the various preceding actions thrown together in consequence of the connexion between them, consisting of sheriff court and other actions.

885. Do you consider that such litigations are attended with disadvantage to the merchants of Leith and to the town of Edinburgh?—There can be no doubt of that.

886. Are you acquainted with the merk per ton levied upon the goods at Leith?—I know the history of the merk per ton; I have had occasion to ascertain it.

887. Will you state it shortly?—The right of levying the merk per ton was first granted in 1636, by a royal charter of Charles I. It was then a grant in aid of the common good, upon a narrative of various services performed by the Town Council of Edinburgh. The original grant had not much reference to ecclesiastical purposes: it was stated in the grant that the magistrates were to build two new churches, in consequence of the right to levy being given to them; but it was principally given in general aid of the common good.

It

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It stood upon that royal grant till the year 1661, when it was ratified, first by the Privy Council and afterwards by the Estates of Parliament, and a change was then made in the destination of the fund levied: it was thereafter solely to be applied to the maintenance of the clergy of the city of Edinburgh.

888. Are you able to state the amount of it at any of those periods?—Not so far back as that. I can state the amount for several years since 1820, and the average amount for the last ten years; the average amount of the net produce has been 2,620*l.* 11*s.* 10*d.* I had occasion to inquire what amount of it was paid on transit goods, and I found that I could not ascertain it, but that the general supposition was that about one-half of it was exacted on goods *in transitu*; I believe it has not been exactly ascertained.

889. Is it your opinion that it amounts to one-half?—I should think so, from my limited knowledge of the subject, not having, however, any immediate connexion with it in the way of trade.

890. Do you know whether it is considered injurious to the trade and manufactures of Leith?—I should think there can be no doubt that any imposition of that nature must be injurious, more especially upon the transit trade.

891. Do you conceive that the Town Council of Edinburgh would have it in their power to substitute for this impost of the merk per ton any other duty upon the import of merchandize into Leith that might be considered of a less objectionable nature, and apply it to the payment of the clergy?—I should consider not at Leith; but they might, upon the consumption of Edinburgh, and within the boundaries of the city, impose something as a substitute for the merk per ton which would be less objectionable in its principle.

892. But you conceive they could not put that impost upon the general merchandize of the port of Leith?—I should think that would come very much to the same thing as the present merk per ton; it would, however, have this benefit, that it would equalize what presses just now in an unequal manner. Any mode that would equalize an impost that presses in an oppressive manner on particular points would be beneficial.

893. Is there any thing in the nature of the grant of the merk per ton that prevents the Town Council from making any arrangement of that kind?—They have a general power to reduce the merk per ton along with other dues; but to the extent of the shore dues and the other revenue, that power has been so far restricted by recent arrangements with the Government, which I do not understand, however, to extend to the merk per ton, as it forms no part of the dues or revenue assigned to Government.

894. Is that power of reduction applied to the merk per ton, without any limitation?—There does not appear to me to be a limitation.

895. Where is the authority for reducing it to be found?—It is contained in one of the Acts already referred to in the previous evidence before this Committee. I have not the particular Act at hand.

896. You state that about one-half of the merk per ton is levied on goods that merely pass through Leith; have you any means of knowing that?—I have had no further means than having heard the opinion of parties who ought to know the subject, from their acquaintance with it.

897. But you never saw any authentic account that would prove it?—No; nor do I understand that any such exists, as I made inquiry for it without effect.

898. Are there any other funds or means by which the clergy of Edinburgh might be supported, without imposing dues upon the commerce of Leith?—There are; the seat rents seem to be a proper fund for that purpose.

899. Do you conceive the seat rents would be sufficient for that purpose?—They would not be sufficient to support the present number of the clergy of Edinburgh; they would be nearly sufficient, if the collegiate or double charges were reduced to single charges.

900. If there were one minister only for each church in Edinburgh, the seat-rents would be sufficient?—They would be nearly sufficient.

Andrew Miller, Esq., called in; and Examined.

Andrew Miller, Esq.

901. YOU are a merchant at Edinburgh and importer of goods at Leith?—I am.

902. You are one of the dock commissioners?—I am.

903. How many years have you been so?—Only one year.

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904. How long have you been a merchant?—Upwards of 20 years.

905. Have you had occasion, during those 20 years, to be well acquainted with the trade at Leith?—Yes, intimately.

906. Do you consider the dues at present levied on the commerce at Leith as injurious to it?—I do.

907. Is there any part of them that you consider peculiarly injurious?—The merk per ton is what is felt to be the heaviest burthen, as being a tax not applicable to the improvement of the harbour or docks.

908. Are the Committee to understand that the objection is applicable to the manner in which the proceeds of the tax are applied, or to the nature of the tax itself?—Both.

909. Will you state in what manner the tax is felt to be injurious in its effect upon the trade of Leith?—There is a very considerable portion of the trade of Leith that consists of goods transmitted through that port to Glasgow, Stirling and other parts of the west of Scotland, and the whole of the goods that come into the port of Leith pay this transit tax, thereby forcing the merchants in Glasgow and elsewhere to convey their goods by Grangemouth through the canal, which they can do at much less expense than coming direct through the port of Leith and paying this transit and other dues of the port.

910. Does that objection apply more to the merk per ton than to other imposts?—It applies to the whole; but it applies to the merk per ton particularly, as the inhabitants of Glasgow find great fault in being obliged to pay a tax to the support of the clergy of Edinburgh.

911. What other objections do you conceive to apply to the merk per ton, in its effect upon the import trade of the port of Leith?—In so far that they can bring those goods at a much cheaper rate by another mode of conveyance; it is detrimental to the port of Leith.

912. In your opinion, is the merk per ton peculiarly inconvenient and inequitable in its effect upon the imports into the port of Leith, in any manner which does not apply to other imposts?—They do not seem to have one regular mode or system of making the charge upon the goods imported as merk per ton; I believe it is done sometimes in the shape of the real weight of a ton of goods, sometimes in the shape of the measurement of a ton of goods.

913. Has any alteration taken place lately in the mode of levying the merk per ton?—I am not aware of any extent of reduction being made by the town council, but I believe there was a slight modification made by them on some articles.

914. You have stated that you import goods yourself to the port of Leith; what description of goods do you import?—Almost every description connected with woollen and linen drapery, furs, hats, French wines and French goods of various descriptions.

915. Can you state the total amount that you pay for shore dues or port dues upon any of those descriptions of goods?—I cannot distinctly state that, but I think it will be brought in evidence by the Shore Dues Office report. I have taken no particular memorandum of it.

916. Can you state what proportion the merk per ton bears to the total amount of the port charges?—I cannot; I think it is about one-fourth of the whole port dues and shore dues.

917. Do you know what description of goods are taken to Grangemouth and transmitted from thence to Glasgow, instead of being landed at Leith, for the purpose of avoiding the payment of the heavy dues at Leith?—All description of foreign and English goods that are consigned to the wholesale and retail merchants from foreign or British ports.

918. Have you any idea what the real value of those per ton is?—I cannot give any calculation of that. I have had no opportunity of making any, they being general cargoes of all description of goods.

919. Have you any idea what proportion 1*s.* 1*d.* would bear to the real value of those goods?—It is impossible to state that; there is such a variety of descriptions of goods, independently of the manufactures of Glasgow and Paisley; there are English manufactured as well as foreign goods that go in that way also.

920. Upon what description of goods is the merk per ton found to be so onerous by the merchants of Glasgow, that they land their goods at Grangemouth in preference, to avoid the payment of the duty?—I should say that it

is principally upon the same description of goods that they import into Leith at the present moment, because there is less delay in the transit than by going round by Grangemouth.

921. Is not Grangemouth in the direct route to Glasgow?—It is in the direct route to Glasgow; but there is much longer time occupied in going up to Grangemouth and in conducting the goods through the canal to Glasgow, than by landing at Leith. The goods, on their arrival at Leith, are delivered in the warehouses at Glasgow and Paisley the next morning, whereas by the time they go up to Grangemouth, it makes a difference of at least a day or a day and a half.

922. Can you state the names of any merchants at Glasgow that have complained to you of the burthen of the merk per ton?—I can state many; there have been many petitions against the merk per ton especially.

923. Do you conceive it would be desirable to substitute for the merk per ton some duty of a different description, as for instance an *ad valorem* duty upon merchandize?—If it is indispensable that such a duty shall be levied upon merchandize at the port of Leith, I think an *ad valorem* duty is much preferable to the one that at present exists.

924. Do you happen to know whether it has ever occurred that cargoes of wood for Edinburgh have gone up to Grangemouth and returned by canal to Edinburgh?—I have been told so by parties concerned in the canal, and also by the shipping interest at Leith, that such has taken place frequently.

925. Was that the common course of trade or an experiment?—In the first place it must be an experiment, but not if it is repeated frequently.

926. Has it been repeated frequently?—I have been told so.

927. Do you know the amount of charges at Grangemouth as compared with those at Leith?—No.

928. Do you know if there are wood merchants at Grangemouth?—There are.

929. Are you certain that the wood that went to Edinburgh did not come from those merchants?—I cannot be certain; my information is from the shippers at Leith and from the managers of the canal, and from wood merchants at Leith.

930. Do you know the comparative charges at any other port of Scotland as compared with Leith, Dundee for instance?—Dundee is lower than Leith.

931. Do you know what would be the difference of charge upon a vessel of 100 tons or 200 tons with a mixed cargo coming to Leith and to Dundee?—There was a report of that sort furnished to the town council of Edinburgh by one of its members, but I cannot speak distinctly to that fact.

932. Do you know the difference of the charges at Aberdeen?—At Aberdeen also I understand it is lower.

933. Has not there been a great increase of the trade of the town of Dundee lately?—Very great.

934. To what do you attribute that increase?—The lowering of the dues is one matter that has increased the manufacture of flax to a very great extent there.

935. Has there been any improvement in the docks and harbour?—There has been a great improvement in the docks and harbour.

936. And a great enlargement of the town?—And a great enlargement of the town.

937. Do you conceive that the lowering of the dues at Leith would tend to increase the commerce and manufactures?—I think it would, decidedly.

938. That the rates might be lowered and yet produce an equal, if not a larger revenue?—I think so.

939. Have you any reason to think that any of the trade at Leith has gone to Dundee?—The flax trade in Leith, I believe, has been decreasing, while that of Dundee has been increased tenfold within the last ten years. That is the staple manufacture of Leith and of Dundee also.

940. You stated that you are a member of the dock commission; are you acquainted with the proceedings that have taken place since you were a member of that commission, and with those previously?—I am, so far as the reports have come into my hands.

941. Does it appear to you that the corporation of Edinburgh and the other portions of the commission have acted harmoniously together in the management of the docks?—I think they have not.

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942. Do you consider the present footing upon which the dock commission is placed a good one?—I do; I consider it a very fair constitution.

943. Are you aware that the corporation of Edinburgh is at present in a state of bankruptcy?—I am.

944. Does that occasion difficulties in the management of the harbour and shore dues?—It has made the present corporation more inclined to draw the revenues, after paying the interest they are bound to pay the Government, into their general coffers, in place of improving the harbour from any surplus revenue that there may be.

945. Has there been any surplus from the receipts at Leith which they have been able to put into their general coffers, after paying the interest of the Government debt?—The treasurer, on making up the state of the city affair, showed between four and five thousand pounds at the last balance, after paying the Government interest.

946. Are you aware that a year's interest is in arrear?—I have heard it stated since I have been here, that there is a year's interest unpaid.

947. Are you aware that the Act of Parliament enjoined a separation to be made between the community estates and those belonging to the creditors?—I am.

948. Has any such separation taken place?—I am not aware whether there is any delivery of the effects given to the creditors or not; but I rather think, at the present moment, that the Community Estates Act has not been put in force; if it has, it is to a very limited extent.

949. Do you know whether that separation is in the course of taking place, or whether it could be enforced more promptly than it has hitherto been?—I think it could have been enforced a great deal more promptly than it has been. I believe there are some actions raised by the trustees against the corporation at the present moment; but it has been delayed a very long time; it is nearly eighteen months since those trustees took the management of that Community Estates Act under their trust, and they seem to have made very little advance in the separation of the two estates.

950. Are you aware that it was for a considerable time a matter of amicable arrangement?—I am aware that there was an attempt made between the two parties to continue the whole load of debt, of about 700,000*l.*, upon the inhabitants of Edinburgh, and to issue bonds bearing two and a half per cent. interest to the creditors, instead of giving them the real property that belonged to them, and giving the corporation the property intrusted to them for supporting the burgh management.

951. Upon what information does that proceed, as connected with the trustees?—My information is from the treasurer of the corporation, Mr. Adam Black.

952. Is he an officer of the trustees?—He is one of the committee of conference that has had all the matter to arrange with the trustees.

953. Did he inform you that that proposal was entertained by the trustees?—He stated that that was part of a proposition that he was making to the trustees for the adjustment of the matter, but he did not say that the trustees had entertained any such proposition.

954. Are you of opinion that it would be an advantage for the improvement of the harbour and the trade and commerce of Leith and Edinburgh, if the shore dues as well as the dock dues were under one commission?—Yes, I think it would be a very great improvement.

955. The shore dues are at present under the town of Edinburgh?—They are.

956. And these questions have arisen between the town of Edinburgh and the creditors of the town of Edinburgh with regard to those shore dues?—They have.

957. There are therefore two distinct managements for the collection of the revenue, one for the dock dues and the other for the shore dues?—They are both collected by the council.

958. Are not the whole of the dues, both the shore dues and the dock dues, received by the town council of Edinburgh?—Yes.

959. Are not they both collected at the same office, and by the same person?—They are.

960. But the dock commission have a separate management of the dock dues?

dues?—There is a separate application; they are quite separate from the shore and harbour dues in the application.

961. What is the fund that the dock commissioners have the regulation of?—They have the regulation of the whole matter connected with the management, repair and improvement of the docks and harbours.

962. Have they the administration of any part of that fund which is the property of the town council?—They have, in so far as they are bound to see that the several Acts under which the dock commission is constituted are strictly observed by the town council.

963. And there is a sum allotted to them for the improvement of the docks?—There is for the repair of docks and harbour.

964. How much is allotted under the authority of the dock commissioners?—I think it is 2,000*l.* per annum for keeping the harbour and docks in repair.

965. Are you of opinion that the revenues arising from the shore, dock and other dues, would be better managed by a commission than by the corporation of Edinburgh?—By a distinct commission, certainly.

966. What are your reasons?—As far as I can see, any surplus revenue, after paying the interest of the debt, they distinctly ought to apply to the improvement of the harbour, whereas at the present moment they have always gone as a common source of revenue, and been applied otherwise by the town council.

967. Then your opinion of the expediency of a change of management, has reference rather to a different application of the revenue, than to any complaint of the present mode of collection and control?—I have seen endless disputes between the commission and the corporation with regard to how this fund should be applied.

968. Are you aware that such a commission was substituted at Dundee for the former mode of management by the corporation?—I am.

969. Has that commission been attended with very beneficial effects?—Very beneficial.

970. Do you attribute the improvement at Dundee in a great measure to that commission having been substituted by the town council of Dundee?—I do.

971. What do you conceive would be the best mode of appointing a commission for that purpose?—Government have the largest interest in the port, being the principal creditors. I think that they and the rate-payers are the two principal parties who have an interest in the formation of that board.

972. Who do you mean by the rate-payers?—I should consider the rate-payers are the parties that directly pay the dues at the port.

973. Do you mean the ship-owner?—He is one certainly, so far as he pays upon his shipping.

974. Can you state how the commissioners at Dundee were appointed?—It was by Act of Parliament; there is a part of the town council that represent the interest of the town council in that commission; and I believe that the principal part of the others are from the rate-payers, that is, the parties paying dues to a certain amount, who elect the parties at that board.

975. Is it confined to the inhabitants of Dundee?—I am not aware whether the county is included, or merely the town of Dundee.

976. Do you consider it would be one advantage from such a commission, that the funds arising from the harbour and shore dues would be entirely destined to their purpose?—Most decidedly.

977. How would you provide for those objects for which a portion of the present shore dues are at present by law liable; for instance, the application of the merk per ton, which is for the maintenance of the clergy at Edinburgh?—I think the seat rents of the churches of Edinburgh are the source from which the clergy should be supported, in as far as they go; if it requires an additional assessment, of course the inhabitants must submit to that, unless there is some other mode that can be pointed out for giving them a fair remuneration for being deprived of the merk per ton.

978. Are you of opinion that if the seat rents were applied in that way there would be any necessity for levying the merk per ton?—I think the seat rents, if they are kept at the same amount as at present, would very nearly pay the average salary for the last five years that the city clergymen have had, without the merk per ton.

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979. How are the seat rents at present applied?—To general burgh purposes.

980. If those funds were taken away from the revenue of the city of Edinburgh, would they be able to conduct the affairs of the town, and pay the interest upon their debts?—No, they would not, they cannot pay the interest upon their debts at present.

981. Then that arrangement would have the effect of depriving the creditors of the small dividends that they may ultimately receive?—My principle is, to give the creditors the same as I would give my own creditors, if I was in the same situation, and the same as I am in the habit of being obliged to do with parties who become bankrupt, who are debtors to me.

982. But you would not divert any part of the bankrupt estate for the benefit of third parties?—I think people must be just before they are generous.

983. Are you aware that considerable part of the city debt was incurred in building churches in Edinburgh, and that the trustees of the creditors claimed those seat rents on that account?—I am not aware that any demand has been made, or that any action has been raised; but I have heard by common report that they mean to make a claim upon the seat rents, as being the property of creditors, in consequence of having expended large sums of money in building churches; but I believe that it can be shown that the churches, in place of being debtors to the city, are actual creditors of the corporation; that they have derived more money from the seat rents than would defray the expense of building those new churches, and the interest connected with it.

984. Did you ever hear what St. George's Church cost?—I have; that that cost from 30 to 40,000*l.*

985. Do you think the town have recovered that from the seat rents?—A great deal more, not taking individual churches, but taking it for the whole. I do not know that any of the money was borrowed specially for building one church. I believe the money was borrowed for the general purposes of the corporation.

986. Is it not reasonable to suppose that the creditors, at the time of lending this money, conceived the seat rents to be a part of their security?—I think it is very likely that very few of the parties who are now the creditors were the persons who lent the money for building those churches.

987. At the time the money was borrowed for building those churches, was it understood that there would be a system of seat rents established?—It had been established long before that; and the Act by which the churches were first seated distinctly bears out that the rents derivable from those church seats shall be applicable for supporting the fabric of the church and paying the stipends of the clergy.

988. Are the Committee to collect that your opinion is, that all the dues levied at Leith, after paying the expense of making the harbour, should be applied to the maintenance and improvement of the harbour, and not to other purposes?—That is my opinion.

Mr. *Andrew Richardson*, called in; and Examined.

Mr. *A. Richardson.*

989. HAVE you been for many years employed in the navigation of vessels belonging to Leith?—Fifteen years.

990. Have you been employed in steam-boats?—I have for three years.

991. Do you recollect what was the state of Leith Harbour eight years ago?—It has been greatly improved since then.

992. To what extent?—By extending the new east pier and the west breakwater, which has made two feet more water in the harbour.

993. Was the harbour then more difficult to enter than now?—Much more.

994. In what winds was it so particularly?—In easterly gales in particular.

995. What was the cause of that?—Owing to the bar being more exposed and the sea coming round much heavier, the channel was much more difficult to take; it is now broken off by the east pier, which has been extended, and by the west pier.

996. What is the steam vessel you have charge of?—The Royal William.

997. How many feet water does it draw?—Twelve or thirteen feet generally.

998. With a moderate cargo, can you in general enter the harbour at high-water?—Without it is very low neaps, we can.

999. What

999. What additional depth of water would you require to enable you always to enter at high water?—I should think from three to four feet.

1000. What would be required to admit merchant vessels of the largest size, that trade with America and to the Baltic, at ordinary neap tides?—About the same depth.

1001. Does your vessel lie entirely dry at low water?—Quite dry.

1002. Has she ever sustained any injury from that?—No, I have never seen her sustain any injury.

1003. Can you explain how that happens?—The ground is quite soft and level where we lie.

1004. Could the channel of the harbour be easily deepened and kept clear by dredging?—I should think it could.

1005. What additional dredging machines would be required for that purpose?—I should say two more.

1006. Are you always able to sail upon the days that you fix?—We are, unless the tide is very low.

1007. Does it often happen that that occurs?—No, very seldom; I should say twice or three times a year.

1008. Supposing the pier was extended across the bank to deep water, so as to conduct the fresh that comes down the river, do you think it would be difficult to keep the channel clear?—No, I should think not.

1009. Would it be easier in consequence of that extension?—I should think it would, owing to the great depth of water running there.

1010. Does not it cease to run when it meets the tide?—It ceases to run in that direction, and it runs in another.

1011. Have you seen the plan of a proposed dock at Trinity?—I have.

1012. Do you think that in a strong easterly gale a steam vessel, such as the Royal William, could take the lock of the proposed dock with safety?—I am inclined to think that it would be rather dangerous.

1013. Why do you think so?—With an easterly gale there would be a good deal of sea probably.

1014. Is not there a double entrance?—Yes.

1015. Would your objection apply to both entrances?—I do not know; but it would apply to the weather one, and it is likely that there would be a tide going.

1016. You think there would be a difficulty of entering at both entrances?—I think there would be a great difficulty in entering at the weather entrance.

1017. But what do you think of the entrance to leeward?—We might enter there, but the space seems to be too narrow for turning.

1018. When you get within the breakwater?—Yes.

1019. Would you prefer keeping your vessel afloat, or letting her lie dry at low water, or does it not make much difference, in your opinion?—It does not make a great difference, so far as I can see; generally a vessel is better afloat.

1020. Is the machinery apt to be deranged when it takes the ground?—I never saw our machinery affected by taking the ground.

1021. Is there any mode of placing the machinery that protects it?—There is no mode, except by making it stronger at the bottom.

1022. Was your vessel constructed with a view of taking the ground at low water?—I suppose so, but I cannot say exactly.

1023. Has she a broader floor than the general steam vessels?—I should not think there is much difference.

1024. Is there any difference in her construction in that respect from the other London steam vessels?—I cannot say.

1025. Have you had any difficulty lately in entering Leith Harbour?—No.

1026. Nor been delayed?—No; we have sailed to and from the harbour these last four months.

1027. Is yours one of the largest class of steam vessels?—We are the largest, except the Monarch and the Victoria.

1028. What is the difference between yours, the Monarch and the Victoria, in point of tonnage?—Our registered tonnage is 292, and the length is 170 feet; I cannot say what theirs is.

1029. At neap tides, does your vessel frequently lie in Leith Roads?—If the neaps are low, we generally lie there.

Mr. A. Richardson.

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1030. Do you consider Leith Roads a safe anchorage?—I do.

1031. Do you know that it was the regular station of the Clyde ship when there was a naval commander there?—Yes.

1032. Does a steam vessel ride as safely in Leith Roads as a frigate?—Yes, she does.

1033. Have you ever known the Royal William driven from her anchors in the Leith Roads?—No, never; we have experienced some very heavy gales of wind since I have been with her.

1034. Does Inchkeith protect the roads?—It does, with easterly gales.

1035. Do you think that a steam vessel lying in Leith Roads, if properly anchored, is exposed to any danger from any gale?—No, I do not see that she is.

1036. Do you ever go to the roads for the purpose of completing your cargo?—Yes, we do sometimes.

1037. What state is the tide in when you do that?—Neap tide.

1038. Is that attended with much expense?—It is.

1039. Therefore if you could get more water at Leith, that expense would be avoided?—Yes, it would.

1040. Is the dredging machine at present regularly employed in the harbour?—I have not seen her regularly employed.

1041. Do you know whether she has been regularly employed?—No, I do not.

1042. Do you think it would be of advantage if she was regularly employed?—I think it would.

1043. Do you know any thing of the state of the sands that lie to the eastward of the pier?—I know such things are there.

1044. Do you know whether, when the wind prevails from the east, they are much washed into the harbour?—Not so much now as it was before the pier was extended.

1045. If it was extended still further, would they be still less washed in?—I should say so.

1046. Are you sufficiently acquainted with Leith to know whether any of His Majesty's ships have driven from their anchors in Leith Roads?—Never, that I can recollect.

1047. What depth of water is there at present on the bar of Leith at spring tides at high water?—From 17 to 18 feet, and at low water about 2½ to 3½.

1048. When you said that the harbour generally is three feet deeper than it was formerly, did you apply that to the whole harbour?—I applied it to the channel.

1049. And to the bar?—Yes.

1050. Has the channel been much narrowed in consequence of the additional depth of water that has been obtained?—It has not been at all narrowed, but rather widened.

1051. How do you land your passengers at Leith?—If the tide answers, we go right into the harbour; but if not, we generally land by boats.

1052. Have you found any inconvenience from landing your passengers in boats?—Yes, a good deal.

1053. Would it be an advantage if you had a pier, where you could run alongside?—I consider it would be a great advantage to the public.

1054. Can a boat get into the harbour at low spring tides?—No.

1055. Where do you land your passengers at present, suppose you arrive at low water?—We generally land them at Leith; but if we cannot land them there, we generally land them at the chain pier.

1056. Do not you use Newhaven Pier at all?—No, we have not used it.

1057. Have the proprietors of the vessel you command made arrangements with the Chain Pier Company to land passengers at the pier in case of necessity?—I do not know.

1058. Do you know whether persons can land there without permission?—I do not know.

1059. Can they land at the stone pier without permission of the trustees?—I believe not.

1060. Therefore when you cannot go into the harbour, you have no other place to land them at but at the chain pier?—No.

1061. Have any vessels been lost coming in or out of Leith Harbour during the last fifteen years?—I remember a sloop lately that went out, but she was not

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in a condition to go to sea; she blew ashore; and I recollect a schooner that was driven ashore by the Black Rocks, but she was out of the channel. Those are all the vessels that I recollect. Mr. *A. Richardson.* 29 May 1835.

1062. You were not at Leith when the Isabella went ashore?—No.

1063. Do you know any instance of a vessel being lost that was properly navigated and sea-worthy?—No, I do not.

1064. Supposing Trinity Harbour was finished, and suppose it was such bad weather in the roads that you found it dangerous to lie there, would you run up the Forth for safety, or run for Trinity Harbour?—The entrance seems to be rather small; I would think it safer to run up the Forth.

1065. What is the width that you conceive the entrance to be?—I think the entrance would be upwards of 100 feet.

1066. If it were 200 feet, would your answer still hold that you would prefer running up the Forth?—In violent gales I would.

1067. How is that entrance, compared with the present width of Leith Harbour?—I should think it is much wider.

1068. Under similar circumstances, would you run up the Forth or run for Leith Harbour?—I would run for Leith Harbour.

1069. Do you think it would be more easily made than the entrance at Trinity?—I am inclined to think so; and if the pier was extended out to the end of the weir, it would be much easier still.

1070. Will you state the reason why you would prefer running for Leith instead of Trinity?—Because I am inclined to think, from the plan of the Trinity, the sea would be more confined at Trinity, and more violent than it would be at the entrance of Leith Harbour with the pier extended out to the weir end. In violent gales, when the sea is confined, it is worse to turn a vessel against it, and it gets more violent; and I am inclined to think that, in cases of that kind, Leith Harbour would be more easily taken.

1071. When you speak of violent gales, do you mean from the east?—Chiefly from the east; those are the worst gales we have in the Frith of Forth.

1072. In that case does the pier protect you?—It does.

1073. Have you ever known the sailing smacks from London coming from Leith to London detained by the want of water?—I have.

1074. Is that a matter of frequent occurrence?—Not so much now as it used to be.

1075. Why is it less now than it was before?—Because the harbour is more cleared away; there is more water in it.

1076. When was the last instance of its happening?—I cannot remember any within the last year.

1077. Are you aware that vessels drawing only fifteen feet water lighten in the roads before they attempt the harbour?—Yes; but that is only in the low neap tides or the ordinary springs.

Mr. *David Wallace*, called in; and Examined.

1078. You are chief mate of the Royal William?—Yes. Mr. *David Wallace.*

1079. How long have you sailed out of the port of Leith?—Sixteen years.

1080. How long have you been on board a steam vessel?—Three years and a half.

1081. Have you seen a plan of the proposed dock and harbour at Trinity?—Yes.

1082. In an easterly gale could a steam vessel, such as the Royal William, take the lock of the harbour with safety?—No, I think not; there would be such a current of sea at the entrance of the lock it would be impossible for a vessel to enter the lock; and there must be a heavy current through the harbour.

1083. Have you seen the plan of a landing place in the form of a T, proposed by Mr. Walker?—Yes.

1084. Do you think it would be better for landing goods out of steam vessels than the plan proposed of Trinity Harbour?—Yes, I think it would. I see by the appearance of it, that whatever way the wind is, you have always got one side smooth water.

1085. You think there would be some difficulty in getting into a harbour at Trinity, on account of the strength of the current between the breakwater and the head of the check piers; have you any notion what that strength of current

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would amount to?—In spring tides it would run about two miles and a half an hour, at high tides.

1086. In ebb-tide or flood-tide?—Both ebb and flood.

1087. Do you see any difficulty in the ordinary state of the weather in a steam vessel going alongside a pier of the T form, proposed by Mr. Walker?—No, I do not see any difficulty.

1088. Would it afford considerable shelter to vessels in most states of the weather?—I think so.

1089. Do you think you would be able to embark your passengers and light goods at it?—I think so.

1090. Can you state what time it takes to embark 200 tons of light goods?—Two hours, or two hours and a half.

1091. What is the greatest number of separate packages that you have shipped on board the Royal William in the course of two hours?—From 1,000 to 1,500.

1092. Did you ever know a man-of-war driven from her station at the roads?—Yes; I did once.

1093. On what occasion was that?—A heavy gale of wind from the westward.

1094. What did they do then?—By letting go a second anchor and giving them more cable, and sending down the top gallant yards and top masts.

1095. What was the name of the ship?—The Dovor.

1096. What size?—A frigate.

1097. If the Dovor had been properly prepared for the gale, would she have been driven from her anchorage in the roads?—No.

1098. Do you recollect the Esther frigate lying in the roads?—Yes.

1099. Was she ever driven from her anchors?—Not to my knowledge.

1100. Does a steam vessel lie as safely in the roads as a frigate?—Yes, I think more safely.

1101. Did you ever know the Royal William driven from her anchors in the Leith Roads?—No.

1102. How many merchants' ships, drawing 14 feet water, enter the port of Leith in a year?—From 30 to 40.

1103. Is that within your own knowledge?—Yes.

1104. How many of them may be timber ships?—About half.

1105. Is it easy to lighten a timber ship?—It is more easy to lighten a timber ship than another ship.

1106. Have you known any vessels wrecked in going in or out of Leith Harbour; within three or four or five miles?—No.

1107. Have you known any meet with serious accidents?—Not to my knowledge.

1108. You have spoken of the pier proposed to be made by Mr. Walker, are you aware that it is proposed that the pier itself should be open; and if that should be the case, could you take in your cargo with a strong gale to the eastward alongside of that pier?—I think so.

1109. When did you see Mr. Walker's plan?—Yesterday.

1110. Are you aware that the cross-head is solid, and the neck of the pier is upon pillars?—I understand so.

1111. And you do not think you would have any difficulty in taking in your cargo alongside of that pier with a gale from the eastward?—No.

1112. How would the current affect it there; would it be as strong as at Trinity?—It might be as strong at the outer part of the breakwater, but I do not think there would be any current inside.

1113. In the event of a strong gale of wind from the eastward, and Trinity Harbour being constructed, would you prefer for safety to run up the Forth, or to take Trinity Harbour?—I would run up the Forth.

1114. If there were water enough in Leith, would you prefer to enter the harbour of Leith, or to run up the Forth?—I would go into Leith.

1115. Why should you make that difference between the harbour of Leith and Trinity Harbour?—It is nearly impossible to take Trinity Harbour with a gale of wind either from the eastward or the westward.

1116. Why?—Because the entrance of the breakwater is too narrow; and if you make it further off any distance, it will give no shelter.

1117. What

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1117. What do you consider to be the width of the entrance?—I consider that the entrance of the breakwater is about 200 feet.

1118. Would you not have a lee side under the western pier, in which you would soon have smooth water?—I cannot see it.

1119. Are you aware that the opening at the Trinity would be as wide as the mouth of the harbour at Leith?—It may be as wide; but you cannot get a ship to enter there with safety.

120. Are you aware how far the Trinity Harbour is proposed to extend into the Forth?—No, I am not aware of that.

Mr. *Robert Philip*, called in; and Examined.

Mr. *Robert Philip.*

1121. YOU have been a merchant in Leith for many years?—Yes, for 25 years; and I am at present a shipowner and dock commissioner.

1122. How long have you been a dock commissioner?—Five years.

1123. Have you had occasion to make yourself well acquainted with the trade and commerce at Leith, and the state of the harbour there?—I have.

1124. What is the nature and extent of the accommodation which the trade and commerce of Leith requires?—The complaints for want of accommodation can only be remedied, in my opinion, by the formation of a pier alongside of which steam vessels may discharge their passengers and light parcels, with ten feet water at low spring tides, and an entrance to the present docks, or some docks sufficiently capacious and deep to admit ships of 500 tons register, with goods, and steam vessels 50 feet broad, so that they may enter easily and lie afloat. That I conceive is the amount of accommodation which the present state of the trade of Leith requires.

1125. Would the execution of Mr. Cubitt's plan of improvement effect these objects?—I believe it would.

1126. Is there any other plan that would accomplish these objects?—There has been a plan of docks and harbour at Granton, and another plan of docks at Trinity; a third plan by Mr. Anderson of a canal and harbour in connexion with Leith docks, all of which would answer these purposes; and there has been also another mode of procuring the same extent of accommodation by extending the eastern pier at Leith, and deepening the entrance to the present wet docks, and widening the entrance to the wet docks.

1127. Which of those plans do you consider preferable?—The respective eligibility of those plans must depend upon their practicability, their comparative expense, and a due regard at the same time to the vested interests of parties; and therefore, in making choice of a plan, I should have regard in the first place to its practicability; and in reference to Granton and Trinity, I conceive there are very serious obstacles to their being executed at any thing like a moderate expense, from their both requiring water-tight walls under water, from the foundation of the pier to nearly 30 feet in height, which in my opinion could not be done without the use of coffer-dams; and if coffer-dams are necessary, the expense of the works would be altogether beyond what I consider the state of the trade would warrant. Then Mr. Cubitt's plan, if it is practicable to carry it into effect, with regard to the dredging, at the expense stated by him in his estimate, it is certainly well worthy of consideration. At the same time I conceive that the expense of a plan, affording all the accommodation, may be much less in connexion with the present harbour at Leith, by an extension of the east pier itself, and upon Mr. Cubitt's own plan, dredging the passage from deep water all the way into the present docks.

1128. What is the state of the docks at Leith, and what improvement do they require?—The present docks would require only a deep entrance, an entrance lock with three or four feet deeper in the sill, to afford all the accommodation that is required, and the gates to be made 55 feet wide, so as to admit the largest class of steam vessels with ease.

1129. Would not the bar be still an obstacle to the entrance of steam vessels?—That bar would be entirely removed by the dredging, commencing the dredging at six feet under low water, and carrying it all the way to the entrance of the docks.

1130. Would not that be a very expensive undertaking?—Not one-third of the expense of the dredging proposed by Mr. Cubitt.

1131. Does not the river tend to accumulate sand?—There is more said

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about the depositing of the river than is warranted. The sand in the mouth of the harbour of Leith is an accumulation arising from the deposit of the sea; it is a sharp rough sand washed in by the sea, but any deposit from the river is of a soft character, and by the action of the tide would be easily swept away every tide, in fact.

1132. Are you not aware that there is a bar at the mouth of most rivers?—In many cases there is, where a river is large, and where it brings down a great volume of gravel, but in this case there is very little gravel brought down.

1133. Do you think that which is brought down by the river at Leith could be easily removed by dredging, at a small expense?—Very easily, at a moderate expense, so much so that within the last three years not only has the material brought down been carried off, but the whole bottom of the harbour has been deepened to the extent of nearly three feet.

1134. Would not the inside of the dock require to be excavated?—The inside of the western dock is at present deeper than the sill by about two feet, and that could be easily deepened by excavation.

1135. What is the depth of the eastern dock, is it deeper than the sill?—The eastern dock is not quite so deep as the western.

1136. As the vessels must pass through the eastern dock to get to the western, it would be of no advantage having an additional depth in the western unless the eastern were deepened?—An entrance may be made into the western without going to the eastern dock at all.

1137. Would there be sufficient water at the western angle of the outer harbour to admit vessels?—That space can be easily excavated by dredging.

1138. Do you know the depth of it?—The ground in that angle to the north of the present dock wall is probably four feet higher than the channel of the river, but it can be carried off by dredging.

1139. Has there been any great accumulation of sand there since the pier was extended?—From the shape of the spot there is naturally an eddy formed during the recess of the tide, and a deposit is formed, but that is not a deposit of sand, it is merely a soft silt. If a breakwater was carried from the eastern point of the dock in a parallel line with the eastern pier, leaving only an opening of 150 or 200 feet wide at the point of the western breakwater, there would be no danger of the eddy being formed.

1140. Is there any deposit of sand in that part of the harbour, or is it merely mud?—It is merely mud over the old sand.

1141. Is it your opinion that the sand in the mouth of the harbour which you have already alluded to, comes from the eastward, being brought there by the prevalent winds from the north and the east; and if the pier was to be extended to the Martello Tower, would the sand be prevented from being washed into the mouth of the harbour?—I am decidedly of that opinion.

1142. Will you state your reasons for that opinion?—The shifting sand to the eastward of the present east pier is all of a sharp gritty character, and evidently comes up from the sea, and is no deposit by the river, which is of a soft silty character. When the wind from the east is aided by the flowing tide, this floating sand is naturally carried over the present entrance to the harbour of Leith, and a portion of it will naturally deposit there. When the pier itself or a sufficiently high breakwater is formed in a continuous line with the present eastern pier, that floating sand will be confined to the eastward, and not be allowed to pass over into the entrance of the harbour.

1143. Is there any sand from the westward with the wind from the westward?—I am disposed to think there is not, for there was a bank formerly extending from the Martello Tower to Newhaven, which was dry at low water, and that bank, since the formation of the eastern pier, has washed in towards the shore, and lessened its breadth by about one half. In proof of that, a straight line projected from the end of the Newhaven Pier to the Martello Tower covered the edge of that bank; now, since the pier has been formed, you may walk up the Newhaven Pier to the extent of one-half the distance, and the bank is still as much removed in.

1144. Is there deeper water there than there was before?—Yes; there is deeper water; the bank is washing in towards shore.

1145. Do not you think there would be any danger of that bank washing in to the side of the pier?—I consider that this bank is supplied with sand simply from

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from the east, and that if this gap is shut up entirely, this bank, in process of time, will wash away as it has been doing.

1146. Did you hear Mr. Walker's evidence upon this subject?—I did.

1147. Do you coincide in opinion with him as to the tendency of the sand to shift from the eastward?—I certainly do; I have always been of that opinion.

1148. And that the plan he proposed of extending the weir to the Martello Tower would prevent any accumulation of sand in future in the mouth of the harbour?—It would have a great tendency to do so.

1149. Would you aid the depth of the entrance by dredging?—Certainly; I conceive that no permanent depth could be obtained without dredging, because the bottom of the soil is clay mixed with gravel, and there is no run of water sufficient of itself to deepen it; the bottom is hard, but once being excavated, I think there would be very little difficulty in maintaining the depth to the extent of at least four or five feet more than at present.

1150. Would you apprehend no danger to the foundations of the pier?—None whatever, because it would be unnecessary to carry the additional depth up to the stone pier; or if to the stone pier, it should be kept at a sufficient distance from it, or the foundation of the stone pier might be secured either by sheet piling or by underfooting.

1151. Can you state what would be the expense of the additional dredging?—Upon the same ratio as Mr. Cubitt's calculation; namely, at the rate of a shilling a cubic yard, I consider that about 12,000*l.* would dredge the passage to the extent of six feet deep; from six feet at low water up to the docks, and thus have a passage six feet deep up to the outer dock wall.

1152. Do you consider that nearly a correct estimate of what the expense would be?—I take the data from Mr. Cubitt's calculation of price, and I have made the calculation of the measurement myself.

1153. Do you think that price sufficient?—If it is at all adequate in the case of Mr. Cubitt's estimate, it must be much more so in this, because the material to be removed to the westward is a hard blue clay; the passage to the eastward is more of a mixed character, gravel and sand, and clay together; and we find that the present dredging-machine is capable of lifting it at less than 1*s.* a yard.

1154. Do you know the expense of the present dredging-machine?—When working 20*l.* a week, besides her heavy repairs and men's wages, the 20*l.* per week will include fuel, and the punts for carrying off the material, and she may lift at about the rate of 300 tons a day.

1155. Are you aware that the late Mr. Rennie and Mr. Telford were against the extension of an eastern pier?—Mr. Telford was in favour of the extension of a weir, and seemed to favour the idea of deepening the present entrance to the harbour. Mr. Rennie's plan was for docks, and an entrance to the westward.

1156. Was Mr. Telford's view of the extension of a weir for the purpose of checking the sand being washed in at the mouth of the harbour?—To a certain extent he approves of the shutting out of the eastern sand likewise; but I would go something further to extend the pier itself, in order that you might get a landing-place of six feet water, which would accommodate small steam-boats and all the short trade; and the only thing that would be wanting then would be a deep water landing-place at the pier, for passengers and light goods.

1157. Do you know how far you would have to go to obtain six feet water?—One thousand seven hundred and fifty feet from the end of the present pier.

1158. How would that be by the Martello Tower?—It would be 500 or 600 feet beyond it.

1159. Would it be possible for any persons to land at the extremity of the eastern pier, either in its present state, or if still further extended in a gale of wind from the north-east?—Quite so; for it is only at low water that any such landing would be required, and the pier then would be so elevated out of the water that no sea could affect it.

1160. Although at high water the sea would break over it?—Yes; no one would think of landing at that point at high water in a gale of wind; at high water the parties would go up into the harbour.

1161. You have stated that you do not think the trade of Leith would warrant the great expense that would attend any attempt to improve the

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entrance to the docks from the westward?—I should be very doubtful of its being an advantageous outlay; at the same time, if the apprehension of a rival harbour rendered it a matter of necessity for the parties deeply interested in securing the revenues, they might be induced with propriety to invest an additional sum to secure that object.

1162. Could the present trade support the present harbour and docks, and a similar harbour in its immediate vicinity?—By no means.

1163. What would be the consequence of any such rival harbour?—Ruin to both parties.

1164. Are you aware that half a million of money has been already expended in the prosecution of the plans you have spoken of for improving Leith Harbour, without producing one foot more water than existed there in 1710?—I am decidedly of an opposite opinion; in the first place, there has not been half a million of money expended; the stone pier was erected in the reign of Queen Anne, and the pier was extended according to Mr. Chapman's plan in the years 1828 and 1829, at an expense of 28,000*l.*; the western bulwark was formed by Government, at an expense of 12,000*l.*, and the consequence of those erections has been that the water has deepened in the channel of Leith Harbour to the extent of three feet.

1165. Do you allow any part of the expense of the docks in the calculation?—I spoke merely with reference to the deepening of the harbour; the effect of deepening the harbour would have been produced by an extension of the piers without reference to the docks.

1166. Does not one of those piers attach itself to the dock?—That pier could have been erected, supposing there had been no dock there.

1167. Must not they have made that pier join the land, which would have cost more expense?—A trifle more expense.

1168. Are you aware what the depth upon the sill of the docks is?—The depth is very various, according to the state of the tides, from about 17½ feet down to 12 feet.

1169. What is the depth of water in the first dock?—It is somewhat deeper than in the sill originally; but it has been allowed to fill up to a certain degree, by not paying attention to the dredging. It requires to be frequently cleaned out.

1170. What is the depth of water in the second dock?—It was originally cut a foot deeper than in the eastern dock, and there is not so much mud in that, because it has not stood so long without being dredged.

1171. Do you happen to know what the docks have cost?—No otherwise than by the accounts of the dock commissioners, passed by the city of Edinburgh, and acknowledged by Parliament. I believe the whole amount upon the works has been 304,000*l.*; but the debt chargeable against the trust was limited by the Government to the sum of 265,000*l.*

1172. Then the sum actually laid out considerably exceeded the Government debt?—To the extent of about 40,000*l.*

1173. Do you know from whence that surplus was obtained?—I believe it must have been obtained out of the other harbour revenue.

1174. Do you know if it was borrowed by the town of Edinburgh?—They did not need to borrow, in so far as the harbour of Leith was concerned, because they would be deriving their 9 or 10,000*l.* a year shore dues. The revenue from the harbour of Leith was then perfectly adequate to the discharge.

1175. Did it produce 40,000*l.* within that time?—Yes; a great deal more.

1176. Do you know whether the ebb-tide forces down any deposit into the harbour of Leith?—I am not aware that it does; I should think not.

1177. If it does, would it not be deposited between the Newhaven Pier and the entrance of the Channel?—I think the action of the tide would be to run down along that eastern pier any silt that might come with it; because the tide meeting the east pier, must be increased in its motion, and it is only in still water that a deposit is formed. There can be no still water at the pier at Leith, from the great action at the entrance of it. When the falling tide comes in contact with the east pier at Leith, it is impossible that it can form a deposit there, from the increased action.

1178. Are you sufficiently acquainted with the set of the current to give a positive opinion upon that?—I cannot pretend to say that I have personally examined

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examined that so minutely. I am merely forming my opinion from long observation.

1179. And an intimate knowledge of the place?—Yes.

1180. If a pier is made inclining to the east, would a vessel come up the Channel with a west wind?—Yes, with a westerly wind; not with a south-westerly wind.

1181. There is a duty levied in Leith, called the merk per ton, has that been generally complained of at Leith?—Yes, it has.

1182. On what ground?—The inequality of its mode of levy, and its application.

1183. Will you state in what respects it is complained of, as unequal in its mode of collection?—In so much that on some kinds of goods of small value its rate is highest.

1184. Will you specify some goods to which that observation applies?—Bark, rags and hides and cotton wool, all of which it applies heavily to, because the merk is charged upon the ton in measurement, not the ton in weight.

1185. Do you conceive that the town council of Edinburgh have the power of commuting this impost for any other description of duty at the port of Leith, which would raise the same amount of revenue in a less objectionable manner?—In a legal point of view, I think they have not, without the sanction of Parliament.

1186. Have they the power of diminishing the rate of the merk per ton, or is it a fixed duty, which they cannot alter?—It is a duty which they may modify to any extent in the way of reduction; there is no such vested right by any party in that duty as would enable them to fix the minimum at which it could be levied.

1187. Then, in fact, the council of Edinburgh could wholly abolish this duty if they were pleased to do so?—If they were pleased to do so, I hold that they have the power of doing so.

1188. But you conceive that they could not, without the authority of an Act of Parliament, either commute this duty for an import duty of another description, or derive the same amount of revenue from any other source?—I am clearly of opinion that they have no authority without an Act of Parliament to do either.

1189. Is not this merk per ton granted to the clergy under an Act of Parliament?—It is.

1190. Therefore the discretionary power vested in the town council to lower the rates does not authorize them to diminish the amount of revenue?—Yes, decidedly, if the rates are reduced, the amount of revenue must be reduced.

1191. Suppose the rate is excessive, may not a reduction in the rate be attended with an increase of revenue?—That is an adventitious circumstance; but which is not contemplated in the Act, which grants the power of diminishing.

1192. Do you imagine that the town council would have the power of reducing the rate so as materially to affect the amount of revenue without making it up to the clergy from some other source?—I conceive that the clergy have no such vested right to compel the levying of any specific sum from those rates, but that it is wholly in the power of the town council to modify those rates for the benefit of trade in any manner they see fit.

1193. Without substituting any thing for it; the proceeds of which shall go to the clergy of Edinburgh?—Precisely.

1194. Are you aware that since the Act passed vesting the revenues in trustees, the corporation of Edinburgh have no power to make any such alteration without the sanction of the Treasury?—I conceive that they must obtain the concurrence of the Treasury in the reduction of all the shore dues, that is, the dues which have been assigned to the Government in security of their debt; but there is no clause which renders necessary a consent of the Treasury to the exercise of that discretionary power, which the council hold in virtue of that Act, for the reduction of the merk per ton. The merk per ton is not one of those duties assigned to the Government in security of their debt; and the control of Government over the reduction of that duty is therefore not given.

1195. Could they reduce that duty without reducing the other dues?—Yes, and they did so last year.

1196. You stated that the application of the merk per ton is objected to?—

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Inasmuch as it is a revenue drawn from the trade, which is not applied to the purposes of the harbour; and it is considered that the revenues of the harbour generally should be made applicable to its maintenance in the first instance.

1197. Can you state what proportion of the merk per ton is exacted from goods that do not go to Edinburgh, but are either consumed at Leith or carried to Glasgow or other places?—I can only offer a conjecture, for there has been no distinct table drawn up by any official authority to show the amount. I should suppose from the general aspect of the trade that it might be from a third to a half; probably one-third fully; I mean that I suppose a third consists of transit trade.

1198. Might the merk per ton be exacted on the goods consumed in Edinburgh without being levied upon those goods consumed at Leith and in other places?—I see nothing to hinder it, if the legislature thought fit to make a regulation to that effect.

1199. Would it make any difference if it was confined to goods imported?—It would make a considerable difference, inasmuch as the goods imported at Leith for the purpose of transmission to other parts of the country would be free; it would be just removing a toll-bar from the port of Leith.

1200. Are the dues that are exacted, including the merk per ton, and shore dues and dock dues, considered oppressive and too high for the trade?—The dock dues are peculiarly oppressive upon the shipping; the shore dues, independently of the merk per ton, are not much objected to.

1201. Have the dock dues been increased?—They have.

1202. Do you consider that that increase of the dock dues has been attended with bad effects?—It has.

1203. At what period did that take place?—About 1828 or 1829.

1204. Do you think the trade and manufactures of Leith would be materially increased, if the dues were lower?—If these objectionable dues were removed, I have no doubt that manufactures would be established in the town, and the commerce of the town would be much improved.

1205. Would it depend upon the establishment of manufactures?—In a certain degree it would; but the transit trade would be also much improved.

1206. Where does that transit trade go at present?—We have both Grangemouth and Fisher Row, and Glasgow itself, through the canal and a variety of other places.

1207. You think the trade at those places would be diminished?—I think it would; the superior accommodation which Leith would enjoy would induce ships to come direct to it.

1208. Have you the means of stating the comparative charges at Leith and at other ports in Scotland?—I have no table capable of stating the difference; but my general information leads me to believe, that the dock dues upon shipping at Leith are higher, whilst the shore dues are not higher, and especially with regard to steam vessels that cannot enter the docks at present, because the entrance is not wide enough. Those steam vessels are charged dock dues in addition to the ordinary harbour rates and the shore dues.

1209. How do they become subject to that charge without using the dock?—Because when the Act of Parliament was passed, it was not anticipated that any thing wider than 36 feet would be required for a ship, and the Act of Parliament authorized the levying of dues upon all vessels that came into the harbour.

1210. You consider that as an oppressive exaction?—It is.

1211. Does a vessel pay for every voyage that she performs in the course of a year, however numerous?—She does not; she pays for eight voyages per year; and the justice of that may appear when you consider that no vessel can occupy the dock more than a year; she may go out and in every day, but it would be a great hardship that she should pay dock dues every time she went out and in; some vessels make one voyage a year and others make two voyages a year, and only pay for each voyage; but if a vessel goes across to Stirling or Montrose or Aberdeen, and makes thirty voyages in a year, she only pays for eight of those voyages, because she is for a very short time in the harbour upon each occasion.

1212. Then the London steamers pay only eight times in a year?—Yes, but they never enter the dock.

1213. Are the vessels that lie aground chargeable with the dock dues, though they may not enter the docks?—Yes, they are.

1214. Are

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1214. Are you acquainted with the management of the shore dues and other dues at Leith?—Yes, I am.

1215. Will you state how they are managed?—The collection of the revenue is in the hands of the corporation of Edinburgh, and they have an establishment at Leith for that purpose. The establishment was last year considerably reduced in the number of persons and expense of collection, but formerly it used to cost a very large sum for the management and collection. There is a separate management for the maintenance and repair and improvement of the harbour, vested in the commissioners appointed by the Act of Parliament; they have also an establishment of their own, a superintendant, a harbour-master, dock-master and deputies; and I consider that those two separate and distinct establishments, which cost at present two separate expenses for the management, might be consolidated with advantage, and a very considerable saving in point of expense made.

1216. Are there any inconveniences felt from that separate mode of management besides that of expense, and would a commission, having the management of both, answer the purpose better?—I am decidedly of opinion that a commission would be more advantageous which had the conduct of the affairs of the port generally.

1217. Will you state your reasons for thinking so?—In the first place, commissioners being situated upon the spot, resident or nearly resident in the port itself, and taking a deep interest in the affairs, would be likely to pay much more attention to the government of the port than parties resident out of it. In the next place, the corporation of Edinburgh have so many duties to perform, so many trusts on hand, and so many other interests to attend to, that they cannot be expected to give that attention to the harbour which it requires; and by vesting the management in commissioners chosen by parties who have an interest in keeping the works in the best state of repair, and the dues at the lowest rate, a better system of management would be induced; there would be no room for extravagance of expenditure on the one hand, and there would be no want of necessary improvement on the other.

1218. Do you think an advantage would arise from having the attention of those that had the management and the application of the funds necessarily limited to the purposes of the harbour alone?—I am of opinion that the harbour funds ought to be devoted, in the first place, to harbour purposes. If any party has a vested interest in any surplus revenue, it would require an Act of Parliament to alter the direction of that; but, in the first place, the whole harbour revenue, so far as it is necessary, certainly ought to be applied to its own purposes.

1219. Do you consider that whatever funds belonged to the improvement of the harbour ought to be employed strictly alone for that purpose, and that a commission intrusted with them should have no consideration of any thing else?—Distinctly.

1220. Are you acquainted with the change of management that has taken place in the Dundee Harbour?—A considerable improvement has been effected within these last few years, and great improvements have been effected in the harbour itself, by the construction of docks.

1221. Has that change been generally approved of as far as you know by all persons connected with the commerce of Dundee?—I have heard of no complaint against the Dundee management since it was altered.

1222. Do you conceive that the corporation of Edinburgh have any interest in Leith beyond what claims the creditors may have over the funds of Leith Harbour?—The idea of a jurisdiction or some notion of patronage, perhaps they may attach some value to; but as to pecuniary interest it must be all gone, inasmuch as they are not able to pay their creditors in full.

1223. You mean that whatever interest they have is now transferred to their creditors?—Yes.

1224. You conceive that these creditors have a direct interest in the revenues of the port of Leith?—I am not prepared to admit that opinion.

1225. Is that a question upon which different legal opinions have been delivered?—I believe it is; it is a disputed point.

1226. Do you know the differences which have taken place between those engaged in the commerce of Leith and the magistrates of Edinburgh with regard to the management of the shore dues and the harbour?—I have been engaged in them myself.

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1227. How long?—Ten years.

1228. Have they been attended with inconvenience to the trade and commerce of Leith?—Great; and with great expense.

1229. Can you state what may have been the expense of those litigations?—Within the last ten years the merchants and traders of Leith, and the commissioners of Leith, have spent in prosecuting what they consider their just rights nearly 15,000*l.*

1230. Do you suppose that the expense has been as great on the part of the town of Edinburgh?—It must have been as great.

1231. Does not that sum embrace getting the bill?—Yes; but that arose out of the question of the harbour.

1232. Will you describe the nature of those questions?—There was first an attempt to sell the property of the docks of Leith to a joint stock company, which was resisted on the part of the people of Leith, upon the ground that it was a trust property, and not a matter of right, which the corporation of Edinburgh had any right to sell. An opposition to that measure was offered in Parliament, and after much litigation was successful. The Bill was thrown out, and the people of Leith upon that occasion spent between 3,000*l.* and 4,000*l.* which they made a claim for from the city, as having protected the property which would otherwise have been carried off and dilapidated, and they have got no part of that money from the revenues or from the city. Then there was the assistance which the people of Leith gave to the city in acquiring the loan of the money from Government, and in the formation of a system of management by commissioners for the harbour and docks. On that account the people of Leith expended probably 1,500*l.*, part of which I believe they obtained. Then next came the disputes with regard to the *ex-officio* members of the commissioners in Leith, who were at the same time members of the town council of Edinburgh. It was found that the general business of Leith was obstructed very much by their constant interference, and it was resolved by the people of Leith to petition Parliament for a Bill in order to get quit of that *ex-officio* interference. That measure was contested at very great expense by both parties. I believe the contest cost the people of Leith upon that occasion between 6,000*l.* and 7,000*l.*, and the city of Edinburgh as much; but the people were successful in getting the Bill. Then the question of count and reckoning came to be raised, and the people of Leith spent 900*l.* before the Court of Exchequer in calling the council to account for the misapplication of revenues; and I believe Sir William Rae's Act, which had the regulation of the funds and the revenue, was very fully expiscated before the Barons of the Exchequer upon that occasion; and it was found by the Barons, that although in the accounts of the city very objectionable charges might appear, yet the Barons themselves under that Act had no authority to do any thing more than to see that the accounts were fairly summed and vouched and paid, and the people of Leith lost their money upon that occasion, and got no redress. Since that time law-suits have been going on to a very large extent in resisting what were considered unjust dues levied alone by the authority of the council, and not by the authority of an Act of Parliament. Several of those dues have been corrected, but a final adjustment of the table of rates has never been effected, and the process is still in progress; some thousands of pounds have been expended also in that.

1233. Do you think those questions would have arisen if the revenue arising from the shore dues and other dues at Leith had been vested in a commission which was to apply them solely to the purposes of the harbour and improvements at Leith?—It is impossible that those questions could have arisen in that case.

1234. How were the large sums that have been thus expended by the town of Leith defrayed?—By the voluntary subscriptions of many individuals, and in the case where the Police Bill was carried, the 6,000*l.* was made payable out of the assessment.

1235. Is that assessment complained of?—It is complained of, inasmuch as that debt is a burthen upon it.

1236. Was there any thing levied on goods imported into the port, in order to defray those expenses you have mentioned?—I believe that in consequence of the expense the parties were put to by the rise of the dock dues and by the great expense of litigation, they raised their freights upon the goods by levying

levying a penny a barrel more than they formerly used to do, but that was no tax. Mr. *Robert Philip.* 29 May 1835.

1237. Did all the shipping pay the penny?—No, it was only those that took a special interest in the matter, they considered that the rates were too low to afford that expense of litigation.

1238. Was that penny kept separate and applied to the purpose of the disputes?—Yes, one halfpenny was, and the other halfpenny was considered a fair remuneration for the rise of the dock dues.

1239. Was this charged upon the people of Edinburgh?—It was charged upon every one that had goods.

1240. Upon what ground was it charged?—Upon the ground that the companies could not afford to carry the goods for less, and to pay all the expenses connected with this business.

1241. It was kept distinct from the general fund of the company?—Yes; the company kept a separate account of the money levied in this way, which they devoted to the purpose of remunerating themselves for that additional rise of dock dues, and the expense they were put to in defending themselves against those vexatious charges.

1242. When was it imposed?—It was levied for some four or five years.

1243. Does it still continue?—No.

1244. Have the dock dues been lowered?—They have not.

1245. Was it a general measure with the trade in Leith?—The great bulk of the trade of Leith agreed to do it; the various companies agreed to do it.

1246. Then it was an additional charge of freight made voluntarily, pointed out in the receipts?—Yes; it was distinctly understood to be for that.

1247. Were the parties that paid it aware, that if they dealt with those companies they were subject to that additional charge?—There is no doubt of that; it was impossible they could pay the charge without seeing it.

1248. And if they objected to the charge, they might employ some other person that did not make the charge?—Yes.

1249. Was it resisted upon any occasion?—I do not know whether it was resisted individually or not, but one of the town council of Leith made a great noise about it. He said that he considered that it should not be levied in that way, and I believe, rather than make any serious noise or disturbance about it, several of the companies agreed to sacrifice their profit altogether, and gave up the additional charge, and they reduced the rate of freight to the former scale, notwithstanding the additional charge of the dock dues.

Martis, 2° die Junii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Mr. *William Bain*, called in; and Examined.

1250. YOU command one of the steam boats that go between Edinburgh and London?—I command the Monarch, which goes to Newhaven. Mr. *William Bain.* 2 June 1835.

1251. How long have you been upon that station?—Since 1821.

1252. Have you commanded several steam vessels there?—I have commanded the Tourist, the City of Edinburgh, the James Watt, the Soho and the Monarch.

1253. All vessels drawing different depths of water?—Vessels drawing from nine to fourteen feet.

1254. Of those the Tourist is the smallest?—Yes.

1255. What draught of water had she?—Ten feet.

1256. When you were captain of the Tourist, did you go into Leith Harbour?—Never, except once or twice upon a particular occasion.

1257. What was the reason of your not going into the harbour?—Because it was a dry harbour.

1258. Do you consider that for a vessel drawing ten feet water there is sufficient depth of water to go in?—Depth of water to go in at tide times; but our company having stated hours to sail, it never would answer to come out at

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that stated hour, because the tides perhaps might not suit; there might be no water at that particular hour, and we could not get out.

1259. Do you find any difficulty in landing your passengers?—Very great.

1260. Are you obliged to land them in boats?—Always.

1261. Where do you land them?—At Newhaven Pier.

1262. Consequently, for all the purposes of steam navigation, the harbour of Leith is perfectly useless?—The company to which I belong never has employed it since one year, when the City of Edinburgh went in to oblige some of the merchants, whiskey distillers.

1263. You are aware that there is another company whose vessels frequent the harbour of Leith?—I am.

1264. Has it come within your knowledge that those vessels are frequently detained twenty-four hours, when they would otherwise wish to sail?—It has.

1265. Is that a matter of frequent occurrence?—It is.

1266. In the course of your knowledge of the navigation of the Frith of Forth, has it occurred to you that either of the vessels you have commanded has been subject to danger from being obliged to remain in the roadstead?—We are often obliged to seek shelter elsewhere.

1267. Where is your usual anchorage?—At Burnt Island, or up at the Hope.

1268. When you arrive from your London voyage, where do you bring up?—Opposite Newhaven Pier, the stone pier.

1269. Do you consider that a good anchorage?—Very good anchorage.

1270. Have you occasionally tried the anchorage opposite the chain pier?—Yes, I have, and I find it is much the same.

1271. You consider the anchorage at one point as good as the other?—Yes.

1272. What is the anchorage further up?—Much the same all the way west, up to near Cramond Island.

1273. Is there good holding there?—Very good holding ground.

1274. What depth of water do you generally bring up in?—At low water we anchor in about twelve feet spring tides.

1275. What distance is that from the head of the chain pier?—I do not know how many yards it may be, but I judge it to be less than a quarter of a mile.

1276. Do you conceive that the construction of a harbour capable of receiving large vessels would be a subject of great importance in the Frith of Forth?—Unquestionably; we have suffered very much without it.

1277. Is not the Frith of Forth itself a sufficient protection to large vessels in rough weather?—Ships may ride a gale of wind out in Leith Roads below Inchkeith or over at Burnt Island Roads, but we can have no facilities.

1278. Has your experience induced you to believe that many instances have happened of large vessels suffering in rough weather in the Frith of Forth from the want of a harbour which they could enter?—Large ships arriving from foreign parts coming to Leith Harbour, drawing more than sixteen or seventeen feet, must anchor in the roads to discharge a portion of their cargo before they can attempt to get into Leith Harbour.

1279. Would not the Frith itself be a sufficient protection in rough weather?—I have seen large vessels driven in the roads till they grounded off Newhaven.

1280. Did you ever know any serious damage done to a large ship in consequence of the want of a harbour?—I never knew any ship absolutely lost.

1281. Did you ever know any seriously injured?—Several ships have been damaged attempting to go into Leith Harbour.

1282. Can you state any instance of any large ship having been seriously injured, when in the Frith of Forth, from the consequences of the weather, and from the want of being able to shelter herself in a harbour?—None occurs to my mind at this moment. In general they have rode the gale out or driven, as I mentioned just now.

1283. Have you known great expense incurred in consequence of not attempting to get into the harbour by being obliged to lighten a vessel before she came into the harbour?—I wrote a pamphlet about 17 years ago, which refers to that very subject; perhaps I may be allowed to read an extract from it. This is a pamphlet addressed to the Lord Provost and magistrates of Edinburgh, written in the year 1818.

1284. What was the object of the pamphlet?—It was when the free trade to

India

India was opened, and Leith was excluded from the privilege, and I felt rather indignant at it; it is dated in 1818, and it contains the following passage:— "On the 29th of last month 26 sail of shipping, with valuable cargoes from different quarters of the world, were detained in Leith Roads by this cause;" that is, the want of water to carry them into the harbour. "The loss incurred by this detention cannot accurately be determined; but besides the cost of victuals and wages for the navigators, and risk upon insurance, it was, perhaps, not less for ten days than 1,880*l.* sterling. The merchant suffers also in a thousand different ways, a severe loss for the want of his cargo; the owner of the ship, too, is likely to be very materially affected; as his ship, by this ten days' detention, may be prevented from making her third or last voyage that season. In another point of view, it is also extremely hurtful and pernicious; for merchants, having a knowledge of this inconvenience, avoid, as much as in their power, sending their ships to this port. The consequence is, that by so doing, the harbour dues levied on the very limited number of ships entering Leith, become so intolerably oppressive as to cause very serious and well grounded complaints."

1285. Are you aware that many vessels that would otherwise unload at Leith, run up to Grangemouth?—I have seen ships do so, and send their cargoes down by water.

1286. Is that a circumstance of common occurrence?—Not this year, but last year and the year before, I think it was; and some years previous to that.

1287. Was that from the want of safety in Leith Harbour, or on account of the dues exacted there?—I was always given to believe that it was on account of the heavy dues levied there.

1288. Was the whole cargo destined for Leith, or was it an assorted cargo?—I believe it was consigned to the merchants at Leith.

1289. Then you consider that the dues at Leith are injurious to the trade, from their being so high?—They are very injurious to those that pay it, on account of the harbour being so confined as to exclude a large portion of the shipping coming to it.

1290. Are you prepared to say, from your own knowledge, that it was solely on account of the dues that they ran up to Grangemouth?—It does not come within my own knowledge any further than I have stated.

1291. Can you attribute it to any other cause, except the amount of the dues?—I can attribute it to no other cause.

1292. You have stated that you have known the vessels of other companies detained at Leith from the state of the harbour; how often have you known that the case?—Several times; I cannot exactly say how often. I have seen them strike upon the bar.

1293. Oftener than five or six times?—I would say four or five times.

1294. As far as the steam navigation only of the port of Leith is concerned, do you think it is a great object to make provision for the landing of goods or for the landing of passengers?—The landing of passengers is of vast consequence where there are two or three hundred thousand people embarking and disembarking every year.

1295. Then a great portion of the present inconvenience would be remedied if a better landing for passengers could be procured?—A very great.

1296. Supposing it was possible to construct a pier to enable steam vessels to come alongside to land passengers, would that get rid of the greatest inconvenience that is felt by the steam navigation at the port of Leith?—That is the principal object, certainly; but there are many others besides that.

1297. Will you state in what manner, in your opinion, the great inconveniences of the present harbour of Leith would be most easily remedied?—My own opinion with respect to the harbour of Leith is, that it never could be remedied so as to admit our vessels.

1298. On what other point on the south side of the Frith of Forth could a landing place or a harbour be constructed so as to obviate those inconveniences?—There are various plans before the public; I have examined them all, and I am still of opinion, that subject having engaged my attention many years, and I may say I originated it, that the point at which I think a pier ought to be erected, and it could be done at a very trifling expense, would be at Granton.

1299. Do you think it would be sufficient to construct a pier only, or would it be necessary to construct a basin wet dock, in which vessels could lie afloat

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at all times?—That would be necessary, but in the meantime we should be very much obliged to any one that would give us a pier.

1300. Would it be possible for your vessels in moderate weather to lie alongside such a pier in safety?—Provided it was run far enough out.

1301. So that your vessels did not take the ground?—Yes.

1302. What are the particular advantages to the Granton point which make you select it?—The advantages are that, in the first place, you have a greater depth of water near the shore; the point where our greatest trade goes to is Glasgow by the Union Canal; a railroad from that would facilitate that operation very much. The next point which I consider of the greatest importance is, that we should be out of the reach then of the local authorities of Edinburgh.

1303. Do you apprehend that there would be any difficulty in leaving a pier at Granton with the wind at north-east, on account of the Drum Sand stretching immediately to the westward of it?—None at all.

1304. Is that answer applicable to sailing vessels as well as steam vessels?—In most winds it would be.

1305. You have stated that you have seen all the plans that have been suggested for the improvement of the port of Leith. Supposing you were at anchor in Leith Roads and a heavy gale was to come from the northward and eastward, would you attempt to take any of those harbours, or would you run up to the Hope or go over to Burnt Island?—If Mr. Stevenson's plan at Granton were executed, I think there would be little difficulty in taking that harbour.

1306. What do you say as to the harbour at Trinity?—I have not that confidence in it that I would have in the other, on account of the construction of the works.

1307. Putting the works out of the question, and considering only the local situation of the two places, do you consider that a harbour might be erected in Trinity to answer the purpose quite as well as the one at Granton?—I have no doubt it might be.

1308. Of the passengers that are in that quarter, do not a large proportion come from Burnt Island and Kirkaldy, and Dysart and Largo?—The greater proportion come from Fife.

1309. Would the proposed harbour at Granton be as convenient for the Fife people coming across the Forth as a harbour nearer Leith?—By the contemplated new wash from that harbour they would be nearer Pitt-street, the centre of the town, by some yards.

1310. Do you mean to say that it would be as convenient for the Kirkaldy boat to go to Granton, as it would be to go to the neighbourhood of Leith?—Granton is no great distance from Trinity.

1311. What is the distance from the stone pier at Newhaven to Granton?—It might be a mile.

1312. You have spoken of the advantages of Granton, in reference to that portion of the trade that would go to Glasgow, but how would you deal with that portion of the trade that belongs to Leith?—From my experience we have very little to do with Leith.

1313. Then you would abandon the capital that has been invested in docks, warehouses and other establishments at Leith?—I would give the public the convenience that it requires and demands: the trade is getting very great.

1314. Do you think it is possible to make the present harbour at Leith a good and sufficient harbour by the present entrance?—Never; I think it is totally impossible.

1315. Have you seen any of the plans for improving the entrance to the docks from the westward?—Yes.

1316. Do you consider that any of those plans would answer the same object as the erection of a pier such as that proposed at Granton?—If the thing could be executed, I dare say that it might facilitate the trade much better than it is now, but I question whether I could give my assent to it.

1317. Do you think it would be impracticable from the natural difficulties of the situation, and on account of the expense?—The expense would be so great, that I think it would render it almost impracticable.

1318. Have you studied Mr. Cubitt's plan?—I have.

1319. Supposing there was plenty of money, what would be the objection to carrying that into effect?—It would be carried into effect with a great deal of difficulty.

1320. Of what nature is the difficulty?—The ground is of that nature that I question whether they would be able to dredge so very deep as would be required for large vessels to get in, and after it was dredged out I think it would soon fill up.

1321. Supposing Mr. Cubitt's plan was carried into execution, what effect would it have upon the Newhaven pilots, as to their beaching their boats and going off from thence?—It would interfere with the pilot station.

1322. Do you see how they could be accommodated, provided that was to take place; is there any beaching ground to the west of the pier?—No, there is no beaching ground to the westward of Newhaven Pier.

1323. Would there be any difficulty in constructing a beach between the sea and the proposed entrance of Mr. Cubitt's harbour sufficient for the purposes of the pilots?—I do not think there could be any beach there.

1324. Between the spot marked (A.) and the Newhaven Pier, do you see any difficulty in constructing a place there for the fishermen's boats?—If you go to the eastward of the western breakwater you may find a spot.

1325. Is not that where they are at present?—Yes.

1326. What difficulty is there in making a place for them there?—They would have nearly the same place then that they have now, because the western breakwater of Mr. Cubitt joins to the north end of Newhaven Pier.

1327. Would not that answer the purpose?—Yes.

1328. Would not they be more protected than they are now?—They would.

1329. At present can they beach their boats there in a gale of wind from the north-east?—Yes.

1330. Would not the eastern breakwater, in Mr. Cubitt's plan, give great protection to that beach in a north-east gale of wind?—No doubt.

1331. Therefore, supposing Mr. Cubitt's plan to be carried into effect, and supposing they could still have accommodation between (A.) and the Newhaven pier, they would beach their boats more easily than they do at present?—Yes, if Mr. Cubitt's plan was constructed to the extent he has drawn his western pier and his eastern breakwater, there can be no doubt but that they would have a much better place to come to, provided the bank did not fill up opposite to the place where their boats now lie.

1332. Do you think it would be likely to fill up?—I think so; I speak of the space between that which Mr. Cubitt has supposed to be dug out for the convenience of the ships, and the eastern part of the western breakwater

1333. Do you think that dredging would be permanent?—No.

1334. Could not it be kept clear by dredging?—The space is very narrow, and if there were dredging vessels there continually, we should not get out or in.

1335. Then your objection to Mr. Cubitt's plan is the danger of silting up?—That is one.

1336. If Mr. Cubitt's canal be carried into execution, supposing that you, with the Monarch, were going into that canal, and circumstances occurred that made it important for you to turn and go out again, could you turn the Monarch in that canal?—The Monarch is 216 feet long, and if I recollect right, Mr. Cubitt's canal is not so broad as that.

1337. Cannot you go stern foremost?—That could be done at great expense of time, because you have no helm to steer her.

1338. Does not the narrowness of the channel make it inconvenient to back out?—Very inconvenient.

1339. Is it likely that you would have occasion to back out, having got into the narrow channel, but not having proceeded further?—No, I do not think it is likely we should get into those difficulties.

1340. Do the same objections apply to Mr. Anderson's plan?—To a great extent; Mr. Anderson's plan, I think, would be executed at a much less expense, and afford almost the desired facilities that we require, without incurring the probability of filling up so soon as that of Mr. Cubitt, by a little alteration in the direction of the western breakwater.

1341. Will you state your reasons for that opinion?—My reason is simply this, that I think the sand coming from the eastward would not find such a ready admission into the one as it would in the other, from the formation of the two plans; and was Mr. Anderson's western breakwater carried out a little

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further, and directed a point and a half more to the northward, I think any thing coming from the westward would find a transit round the eastern pier.

1342. Then the risk of silting up in Mr. Anderson's plan, if any, is extremely small?—I think it is much smaller than that of Mr. Cubitt's, owing to the different formation of the piers, and the little extent you would have to dig out.

1343. Would you have any difficulty in taking the largest steam vessel that comes into that harbour?—None at all, if there was water.

1344. With respect to silting up, what is your opinion of the plan you have seen regarding the formation of a harbour at Trinity?—That is so far in the bay, that every thing would pass it; the bay formed by Granton Point on one side, and Wardie Point on the other.

1345. Has the present pier at Newhaven sanded up or not?—I think there is very little difference one way or another since I knew it.

1346. If that should be the fact, how does your observation hold with respect to the harbour in Trinity, which projects further into the sea than the present pier at Newhaven?—If that has sanded up to that extent, certainly the other must sand up still more; but I doubt that fact.

1347. When you talk of the danger of silting up of those places, do you judge from an exact knowledge of the set of the tides?—By looking at the formation of the coast, I would take that for granted.

1348. But you have never examined the set of the tides so as to know the manner in which they will operate in bringing the deposit either with the flood or the ebb-tide?—Not so accurately as to give a decided answer to that.

1349. And when you speak of there being very little difference at Newhaven Pier, do you judge from your own observation?—I do.

1350. Do you know, in point of fact, from going into that pier in boats, and going outside of it in steam vessels, whether there is or is not any considerable difference in the depth of water since it was constructed?—I should say it was very inconsiderable indeed.

1351. Is not the proposed harbour in Mr. Anderson's plan a tidal harbour?—So far as I can understand Mr. Anderson's plan, he proposes digging out the whole breadth comprehended between those two piers; and if that was done to the depth of 12 to 13 feet, or say 14, without going into any of the arrangements on the eastern side, perhaps the public would be satisfied with that accommodation.

1352. You are aware of the site of the proposed harbour at Trinity, and you know the depth of water there?—Yes.

1353. Do you suppose it possible that equal accommodation would be afforded by Mr. Anderson's proposed harbour to what would be afforded by the proposed harbour at Trinity?—I am not able to answer that question accurately, not being an engineer; but, from my own experience, I should say that there would be great difficulty in taking a ship into Trinity harbour in a gale of wind.

1354. The question refers merely to the position, and the question is, whether Mr. Anderson's proposed harbour could, under any circumstances as to depth of water, afford equal accommodation with a harbour constructed at Trinity?—If Mr. Anderson's plan, as drawn out here, was executed to the full extent to which he says, I dare say it might be a place of still greater safety almost than Trinity.

1355. Could you enter it more easily in a gale of wind?—I think so, according to the plan.

1355*. Would you have equal depth of water there as at Trinity?—There ought to be more at Trinity; for, if I recollect right, it goes 200 feet further into the sea.

1356. What is the depth of water at spring tides?—I believe 17 feet, and at neap tides 12.

1357. You say that you think the entrance to Mr. Anderson's harbour would be much easier than the Trinity entrance, why do you think so?—It appears to me that the breakwater laid down in the Trinity plan would not give sufficient protection to the vessels coming round it, particularly in a gale of wind.

1358. What protection is there at Mr. Anderson's?—He has got the eastern pier to cover you.

1359. Would that give any protection with the wind blowing at north-west?—It

—It would give the same protection that Leith breakwater gives to Leith Harbour at present.

1360. Would it give any?—A great deal.

1361. How would that be afforded?—From the western breakwater.

1362. At the mouth of the harbour?—Not at the mouth.

1363. Then you suppose that the protection is derived after you pass the head of the eastern pier?—After you enter the harbour.

1364. But in coming into the harbour what protection would you have?—None at all till you come into that space.

1365. Therefore you must be in the channel before you get any protection?—You must lie between the heads of the pier.

1366. You have already stated that you would alter the line of the head of the western pier of Mr. Anderson's plan?—I think it would be better, in my humble opinion.

1367. How much would you alter it?—Perhaps a point.

1368. You would throw it more to the westward?—Yes.

1369. What would the effect of that be?—It would have the effect of preventing what I have been just asked about.

1370. You see in Mr. Anderson's plan an arched water-way, what do you think the effect of that archway would be as to the operation the ebb tide would have upon the harbour?—It appears to me to be beyond low water mark; I cannot see the utility of those arches there.

1371. Do you think the ebb tide would be likely to bring down the sand and whatever deposit there was, and carry it through that archway, and therefore deposit it in the harbour?—There can be no question of that.

1372. Is there any means of its getting out when it is once there?—No.

1373. Do you see any difficulty in a ship in a north-east gale of wind coming round the end of the eastern pier and getting in safety into Mr. Anderson's harbour?—None at all.

1374. Do you see any difficulty in ships under the same circumstances getting into Mr. Cubitt's harbour?—No, I think that might be taken, but not so well as the other, because Mr. Cubitt's eastern pier does not afford the same protection in a north-east gale as Mr. Anderson's.

1375. Supposing a north-west gale of wind, and allowing there was water enough in Mr. Anderson's harbour, would there be any difficulty in a ship making that harbour, seeing the wind would be quite fair for her to run in, and she could then put her helm a-port and take the shelter of the western pier as soon as she has passed the western pier head?—I think it could be done with very great ease.

1376. Now look at the plan laid down for Trinity Harbour; do you think in a north-east gale of wind a ship could go round the eastern end of that breakwater, and get in safety under the shelter of the breakwater?—I see that the breakwater is formed as a place of shelter from the east-north-east to north-west, therefore wherever that shelter is afforded a ship would be protected.

1377. If it was blowing a gale of wind from east-north-east to north-north-east, do you think a ship could put herself under the shelter of that breakwater?—I should hazard doing so myself, or hesitate doing so, unless I were perfectly well acquainted with the localities of the place more than I am now.

1378. From the manner in which that breakwater is constructed, do you think that if a heavy sea from the north-east was rolling into the Forth there might be a considerable scud of the sea under and behind the breakwater, or inside of it?—Unquestionably there would be, and all around it.

1379. Supposing the check piers, instead of being straight were elliptical, and the harbour was increased in magnitude from six to eleven acres, and a further extension of 300 feet was thereby occasioned to the entrance between the breakwater and the check pier, what would you think then? Do not you think a vessel under any circumstances of wind might run for it there?—Yes; a breakwater could be so constructed as to make the anchorage perfectly safe.

1380. From your long experience in this navigation, would you undertake to say, that in a gale of wind at north-east, and having the charge of a valuable ship from China, you would run round the breakwater and take the chance of anchoring her for shelter in safety, in preference to trusting to your own anchors in Leith Roads?—Unless the ship got into dock immediately it would not be

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safe to do so, because I see only ten or eleven feet at low water, therefore it would be quite impracticable to do so at any other time than at high water.

1381. Looking at it as a place for steam vessels to come to, would it afford considerable shelter and facility to steam navigation?—If the breakwater was a little further extended I think it might.

1382. Supposing a ship that would ride in the depth of water that is intended inside of the breakwater was to be at anchor there, do you think that the scud of the sea, in a north-east gale of wind, would be such as to put her in any danger?—It would certainly, in my opinion, have a considerable effect upon her.

1383. Do you think that, constructed as the breakwater is proposed to be, in a north-east gale of wind it would sufficiently shelter the entrance to the wet dock as to enable you to open the gate or take out the caisson so as to let a vessel enter in a north-east gale of wind?—If the eastern piers were solid, I can see no great difficulty in a ship entering, because the sea would be broken off when they get within the dock-head, but they must be solid to prevent the surge of the sea coming in there.

1384. Then you consider there would be a considerable surge of the sea in a north-east gale of wind?—I think so.

1385. At the commencement of your examination, you mentioned that you had heard of vessels being taken up to Grangemouth to be unloaded in consequence of the alleged heavy dues chargeable at Leith, what sort of cargoes were those vessels laden with?—Timber.

1386. And no other?—And no other.

James Anderson, Esq., Civil Engineer, called in; and Examined.

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1387. YOU are a civil engineer?—Yes.

1388. Have you been long employed in that capacity?—Upwards of twenty years.

1389. Have you been employed upon any works on the Frith of Forth?—I have both designed and constructed several works in the Frith of Forth for the last 20 years.

1390. Will you state the particular works upon which you have been so employed?—In the years 1815 and 1816, I was engaged in preparing a chart of part of the eastern coast of Scotland, comprehending the Friths of Forth and Tay, when my attention was necessarily directed both to the soundings and currents of the Forth. In 1817, I was engaged in taking a survey and soundings of the Forth at Queen's Ferry; and in 1818 published my plan and report for an iron suspension bridge across the Forth at that place. In the latter year, I was employed to make a survey and plan of the harbour of Elie, upon the coast of Fife, and to report to the Court of Session in Scotland, in consequence of a vessel that had foundered and sunk at the mouth of the harbour, during a violent gale from the east. In 1822, I designed and constructed the present bulwark and sea wall on the coast at Wardie, to the west of Newhaven, the former structures having been repeatedly washed down, and it is not only satisfactory, but confirmatory of the principle on which these works have been executed, that whilst all other works of the same description along the coast have repeatedly given way, not a stone of the Wardie works, although in a very exposed situation as compared to the others, has been displaced. In 1824, I planned the sea wall and new approach to Newhaven Pier, which was executed in 1826 and 1827, and which was effected by making an encroachment on the sea, and required special attention as to its effects. In the same year, I also designed the roadway along the sea-beach westwards of Newhaven Pier, and the sea works connected therewith. In 1829 two very considerable portions of the sea walls of Portobello Harbour were washed down by heavy seas; these were rebuilt under my directions. In 1830 nearly the whole structure of the seaward abutment of the suspension pier at Trinity was renewed, under my directions and immediate superintendence. This was both a very difficult and hazardous operation to remove and replace nearly the whole of the piles, which had been destroyed by the insect or sea-worm, and at the same time to preserve the tension and great strain on this part of the fabric, which supports the whole structure. In 1831, I designed and prepared a plan of a new harbour for Portobello, of which notices were given relative to obtaining

ing an Act of Parliament. In 1833, at the instance of the proprietor of Trinity, I designed a low-water pier breakwater, and wet and dry docks, at Trinity; and in 1834, my plan and report (which now lies before this Honourable Committee) for the improvement of Leith Harbour were published; and at present I am employed, at the instance of the Earl of Elgin, to determine what improvement can be made on his harbour of Charleston, for the accommodation of steam vessels.

1391. Are you intimately acquainted with the present state of Leith Harbour?—I am.

1392. Do you consider it possible to improve the present eastern entrance of Leith Harbour, so as to enable heavy ships to enter?—Certainly not; I think, in a great measure, it is not only impracticable, but the expense would be enormous even to retain the depth, could it be acquired.

1393. Do you think it would be practicable, by extending the present eastern pier, or the weir that projects beyond it, to obtain three feet additional water in Leith Harbour?—I will take the liberty of reading a note from my report, at the bottom of page 13. "Since so much has been done by no means with commensurate benefit for the present entrance to Leith Harbour, which I am well aware will and must be used by a considerable number of the vessels trading to the port, I am of opinion there would be some justice in extending the weir to the Martello Tower, with a view to confining both the flowing and receding tides to the fair way of the channel. This, however, ought to be effected at the least possible expense, as, after all, it can be considered no other than a minor expedient, absolutely incapable of fulfilling the purpose contemplated in a great harbour. It would indubitably render the present works more available than they now are, or can be, without such addition."

1394. The plan you think most expedient for improving Leith Harbour is by making a canal, communicating with the present docks from the westward?—It is.

1395. Will you state the particular advantages which you think would be derived from the plan you have suggested?—First, I beg to call the attention of the Committee to the depths at low water at spring tides. The position which I choose for my low-water pier is 900 feet west from the direction of Newhaven Pier, or a line produced in its direction into the Forth; in that position low water is found 200 feet nearer the shore than in any other spot, till you get to Granton. I use Newhaven Pier because it saves expense, and requires much less building. I carry my low-water pier out to 10 feet in depth at the lowest ebb of stream tides, the head of which pier projects about 200 yards beyond the head of the proposed breakwater on the west, so that, in the event of gales either from the east or west, ships could readily take the entrance; for instance, in a gale from the east, a vessel could swing round the projecting head of the pier, fall into the lee of it, and come easily into the entrance channel, and from the west the course is quite clear. It may be said that this entrance is exposed to the north-west gales; but I beg leave to inform this Honourable Committee, that that is a direction which the wind very seldom blows from, and moreover that the prevailing wind for 10 months of the year is from the west and south-west; the heavy seas are from the east, because it is not only the east wind, but the swell of the water from the German Ocean, that creates more action upon the Forth than the heaviest storms from the west. I propose to excavate a channel 200 feet in width, from the point of the pier inwards, on a level with it, that is, 10 feet below the lowest ebb of spring tides, and to continue that excavation on to the present Leith wet docks. The datum of the lines of soundings, marked upon my plan, is from the ebb of a 20 feet rise of tide at high water spring tides, and 18 inches below the sill of the Leith Docks. I believe there is just a difference of about three inches between Captain Dall's datum of soundings and my own; therefore the channel of the canal or wet dock which I propose would be 11 feet 6 inches below the sill of the docks at Leith, and would contain 30 feet depth of water at high water of spring tides. From the canal, I propose that a flood-gate (not lock-gate, but simply a flood-gate) should be placed on the entrance into the present western wet dock. This, I conceive, would complete the communication, and render the present docks available as a low-water harbour, because the entrance channel at low water of ordinary tides would admit all vessels drawing from 13 to 14 feet of water, while the wet dock or ship canal would float the largest vessel in His Majesty's navy. I may be allowed to explain here, that I got the

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the dimension of the length of the keel of the steam ship, instead of that from the bow to the stern; in consequence of which, I have, in my report, stated the sea lock only to be 170 feet in length; but that matters not, because the lock may be extended 200, 300 or 400 feet if necessary. In my proposed harbour for steam vessels, it appears, upon the plan, that it is all a floating harbour, but it is only intended to be excavated to the width of 200 feet, for an entrance channel along the west side of the pier. I only show what might be done in the event of the ship canal not being executed, because at the time I designed the proposed works, and even since I obeyed the summons of this Honourable Committee, I have been informed, that provided a low-water pier only were carried out, that it would be sufficient to serve all the purposes of the trade, and therefore the remaining portion of the harbour could be excavated, if found necessary.

1396. What is the estimated expense at which you think these works could be executed?—My calculations amount to 124,695*l.* 11*s.*; there is 9,695*l.* 11*s.* taken off in the event of a railway being laid down to facilitate the carriage of materials; but I had rather that the expense for executing the works should remain the full amount of the estimate.

1397. Does that include the whole of the works that would be necessary to afford a deep water communication with the present docks at Leith; in short all that is coloured red in your plan?—Yes, it does; but it may hereafter be advisable to arch the whole space of the breakwater betwixt high and low-water mark.

1398. Do you consider that this plan could be executed at a lower cost than the plans which have been submitted by Mr. Cubitt and other engineers who have given in plans for improving the harbour of Leith?—I have not made any estimate of Mr. Cubitt's works. I do not approve of their construction, in so far as that he fills up his nuclei with the material excavated out of his channels; and from my experience, in works along the coast, even the bulwarks constructed at high-water mark have been repeatedly broken down when they were founded upon the hard original clay, and in that exposed situation, as far as my experience teaches me, I cannot see that Mr. Cubitt's works would stand even if they could be finished. The works of my plan could be executed at less expense than either Mr. Cubitt's or those proposed by any other engineer which I have seen for improving Leith Harbour.

1399. You mentioned that you had been employed to make a survey of the currents in the Frith of Forth, had you occasion to observe the tendency of the sands to shift?—Yes, I had.

1400. Do you think that from the construction of any of the works that have been recently undertaken at Leith there has been any material alteration in the position of the lands at the mouth of the harbour?—Yes, I think there has.

1401. Will you state what the alterations are?—Before the extension of the eastern pier by Mr. Chapman's plan, there existed two bars across the mouth of the harbour; the inner bar was situated from four to five hundred yards seaward of the head of the stone pier; the outer bar was further seaward, and elevated about one foot above the inner; that is, it had one foot less water upon it. The depth at highest spring tides was about 17 feet; at neap tides 9½ feet; that was upon the inner bar, and upon the outer bar one foot less; the inner bar does not now exist, but the outer bank does and will continue to exist; the inner bar lay principally in the channel of the stream, and the pier being now extended, it is removed; about a twelvemonth ago, at 160 yards seaward of the new pier-head, the course of the river stream ran to the west, and did not keep alongside of the weir; the bank close to the weir at that time was about a foot above the dock sill. Captain Dall has informed me that he has since dredged out the part of the bank along the weir, and that obstruction does not now exist; but this has not removed the bank; it has simply cut a narrow channel through the bank, and which would require to be maintained at all times by dredging.

1402. Then you do not consider that the deepening the channel has made any great alteration in the depth?—It has made an alteration, because the sill of the docks is now nearly dry, but probably a foot or two feet more water might still be obtained by extending a rubble stone weir on towards the Martello Tower, and be applicable for a number of vessels that draw even more than 12 feet water; but in this case, dolphins would require to be put down to mark the course of the weir at high water.

1403. That would be obtained in the channel, but not upon the bank?—Yes;

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Yes; but I beg to remark that in excavating this channel, the bar would still exist even in the channel; its extent, position and elevation will vary and determine according to the direction of the wind, state of the tides and floods in the river; for instance, an east wind, high spring tide, with a flooded river, which brings down not only mud and sand, but also gravel; a bar would be formed immediately, if not removed by dredging; and in that case, at the height of spring tides, the bar would be removed farther seaward, and at neap tides it would exist farther landward.

1404. In selecting a spot for the entrance of your proposed harbour, have you had reference to the tendency of the deposit of sand?—I have.

1405. Do you think the situation you have chosen and the manner in which your harbour is to be constructed, has any peculiar advantages over Mr. Cubitt's and Mr. Rennie's?—Yes, considerably so; because the sites of Mr. Rennie's and Mr. Cubitt's entrances are on shallow, rocky, foul and sandy ground. There is no sand or silt that comes from the west; it is from the east; it is the swell of the water from the German Ocean that acts upon the channel and brings up the sand. The site of my entrance is in deep water and on clean ground. Since the extension of the eastern pier at Leith, I believe the western sand bank has been somewhat lessened; it may be said that peat from Blair Drummond Moss comes down the Forth, but that is not the case. The tides in the Forth run variously, both in respect of time and velocity. This is caused partly by the formation of its shores, and partly by the obstruction of islands and shallows, and the meeting of currents; for instance, over the sands of Leith there is an apparent receding tide two hours before it is high water, because the pressure of the current on the outside of the Black Rocks, which runs very strong, causes an eddy to exist in the space between Newhaven Pier and Leith Pier, and running eastwards at $1\frac{1}{4}$ knots an hour, while the actual tide after high water runs at the rate of $2\frac{1}{2}$ miles an hour; therefore, the flowing tide, which runs $1\frac{1}{2}$ knots an hour, appears to flow only for four hours, while the ebbing tide continues for eight hours. On the north shore, and in mid-channel, the tides run equal in respect of duration, and at the rate of from three to $3\frac{1}{2}$ knots an hour; the current or flowing tide strikes hard, and runs very close upon the north shore from Kinghornness to the promontory west of Aberdeen at $3\frac{1}{2}$ knots an hour; it again flows through the cut at Queen's Ferry at the rate of five knots an hour; about six miles above Queen's Ferry it flows at the rate of about two miles to $2\frac{1}{4}$ miles an hour, and the ebb tide at the same rate. The ebb tide again runs through the strait at Queen's Ferry at six knots an hour; this violent current causes the ebb tide again in the bay on the north shore, which is found by the north headland to flow to the west for two hours after the turn of the tide, and at the rate of $1\frac{1}{4}$ knots an hour. When I was at Lord Elgin's in the middle of February and March last, I found the harbour of Charleston silted up four or five feet with peat mud. Lord Elgin asked me, how this could arise, because the harbour was only open to the south and east, while the peat came from the west. I explained to his lordship the cause, namely, that the ebb tide carried down the peat, but the gravitation of the peat being much lighter, of course, than that of water, it is thrown by the middle current into the north bay, which is an eddy, and which flows to the west instead of the east, as I have already described, and in that situation the peat mud is lodged; when the wind, therefore, is in the east, and a flowing tide, then the silt is carried upwards into Charleston Harbour; and I am of opinion that all the peat mud is deposited above the strait at Queen's Ferry.

1406. You consider, with the direction you have given the entrance of your harbour, it is not likely to be choked up with sand or silt?—I am confident it cannot choke up.

1407. You are aware that the fishermen of Newhaven draw their boats up upon the beach close to the village; would there be any means of doing that if your plan was executed?—There would be no difficulty in doing so; an inclined plane could be formed immediately to the east of Newhaven Pier, where they could be beached and lie upon the embankment between the sea-defence wall and the wet dock, which is 100 feet in breadth.

1408. Could they be beached there with equal facility as at present?—With greater facility.

1409. Would they lie in greater security than they do at present?—Infinitely more so.

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1410. Would not that inclined plane be made at great expense?—Not at all, the expense would be trifling.

1411. What protection would they have from the east?—They would be completely within the sea-defence wall; they would lie between the wet dock and the sea wall.

1412. Would it not be better that they should go upon the beach inside of the harbour than outside of it?—There is no beach inside the harbour, because it is bounded on shore by a high wall.

1413. Would they not, in point of fact, have greater security by going into the outer harbour than by going upon any beach at all?—I think they would be infinitely better in the harbour.

1414. Then would it not be a work of supererogation to make a place for them to be beached outside of the harbour?—I think it is quite unnecessary; there is sufficient protection for them in the outer harbour.

1415. Would it not be a better protection for them than any thing that could be formed outside?—Infinitely better.

1416. What is the depth of water that you propose to have in the wet dock?—By shutting the flood-gates at high water of spring tides there would be 30 feet head of water.

1417. How deep would you excavate it to obtain that?—On the same level as the point of the pier, which would be 11 feet 6 inches below the sill of the present docks; the average cutting would be about 14 feet deep.

1418. Would ships drawing 17 feet water always lie afloat in the dock?—I consider it would be sufficient to float any of His Majesty's navy if the flood-gates are kept shut.

1419. How do you propose that the pilot-boats should get out of the harbour at low water?—They would be in the same situation as they are at present; they would be ready to float when required.

1420. Is there no difference between a boat being in a harbour, which is liable to be mudded, and lying upon a pebble beach?—I spoke just now of what is done at Newhaven, where they are as often dry as afloat, they would have at least the same accommodation; but by excavating a little more of the entrance channel, they might lie in the south-eastern angle always afloat.

1421. But you would require further excavation?—Yes, which could be done at very moderate expense, because it is within low water mark.

1422. Would not that fill up at every tide?—I have already stated that I apprehend no silt from the west.

1423. Then how do you account for the sand-bank which has been created to the westward of the present pier?—It has been brought from the east, partly from the current outside of the Black Rocks, and partly from the sands of Leith themselves, previous to the operations by Mr. Chapman's plan.

1424. If it came from the sands of Leith, how do you account for its having passed over the mouth of the channel and deposited itself there, and leaving the mouth of the channel?—The flood-tide finds its course in different directions over the bank; last year it left the weir entirely and took a direction to the west, and came in at the east end of that same sand-bank.

1425. Then it is your opinion that no portion of that sand-bank is occasioned by sand coming from the west, or is created during the ebb tide?—I do not believe it is; and the fact is, that since the operations of Leith Harbour have been extended, the bank has decreased, I believe, considerably.

1426. You stated that you do not consider that north-west winds prevail very much, but are you not aware that the north-west wind in these climates very often blows strong, and therefore, although the wind is not in that direction very frequently, do not you consider it desirable to provide against the effect of it?—I would consider it a great objection to block up or shut the fair entrance into the harbour, in order to keep it from the north-west wind. There scarcely exists a harbour but what has its entrance exposed in some direction, and therefore I choose this as the least exposed; the prevailing winds are from the west and south-west; the swell of the waters is from the German Ocean on the east; and the harbour, I conceive, is perfectly protected from these quarters.

1427. You have stated that, in carrying into effect your plan, you propose to excavate the channel; is the Committee to understand that the only excavation you contemplate is the channel?—The only excavation I contemplate is the channel, 200 feet in breadth, on to the lock-gates.

1428. You

1428. You have stated that you get a depth of water 200 feet nearer the shore than is to be procured any where between that and Granton, is that from your own knowledge?—From my own knowledge.

1429. You do not consider that an equal depth of water would be procured off the chain pier at Trinity?—Not at the same distance, either from low water mark or from high water mark; as nearly as I can judge from the soundings, 10 feet depth at low water spring tides in the line of the chain pier is from high water mark 1,900 feet, while from high water mark to the point of my pier it is only 1,700 feet; from low water mark to 10 feet in the line of the chain pier is 1,400 feet, and from low water mark to the point of my pier is 1,200 feet.

1430. Is not the entrance to your harbour at the eastern pier very near the spot where the entrance to Trinity Harbour is proposed to be?—It is about half way between the line of Newhaven Pier and the Chain Pier.

1431. What is the distance between Newhaven Pier and the Chain Pier?—Very nearly 1,700 feet.

1432. Consequently the half of it would be 850 feet?—Yes, or, in other words, the point of my low water pier is 900 feet west from the direction of the Newhaven Pier.

1433. What would be the distance from the extremity of your eastern pier to the entrance of the proposed Trinity Harbour?—It appears to be about 450 feet.

1434. Would that distance of 450 feet give the difference in the depth of water you have stated?—It gives the difference of the depth of water, because the entrance to the Trinity Pier is much further out, consequently there would be more water there; but I take the entrance of Trinity wet dock at the point of 10 feet sounding.

1435. Taking the entrance of your own harbour at the end of your eastern pier, which extends the furthest out, and taking also the entrance to Trinity Harbour as it is proposed, have you a greater depth of water than they would have at the entrance of the Trinity Harbour?—I have the same depth of water at my entrance as at the Trinity Harbour, but I am 200 feet nearer the shore than they are at the seaward extremity of their wet dock. It makes a very material difference in expense, the carrying out works 200 feet further into deep water; by merely comparing parallel lines from one point to another is not a correct view. The works at Trinity are actually carried out nearly 600 feet further into deep water than it would be necessary to carry out the body of my works.

1436. You have stated that there would be an equal depth of water at the entrance to Trinity Harbour as at the extremity of your eastern pier?—Exactly the same; the entrance to Trinity wet dock is in the same line of soundings as my entrance.

1437. With respect to the pilots and fishermen at Newhaven, do not you consider this plan of yours would have a very pernicious effect with regard to the situation of those people?—I think they would be bettered by it infinitely, because they could lie in the outer harbour, which I have already explained.

1438. With regard to the Fort at Leith, does not the canal you propose interfere with the public works there?—Not at Leith Fort; it does not even touch upon the present bulwarks.

1439. Would it render the Government property less available?—It would make it three times the value it is at present. I am well acquainted with property both at Edinburgh and Leith, and that property has very much deteriorated since the Government purchased it, and if this canal were extended along the beach the value of the property would be considerably more than trebled.

1440. You stated that you have, in consequence of what has passed in this Committee, turned your attention to the consideration of adopting that eastern pier as a landing place for steam vessels, without any reference to the ulterior works connecting them with the present docks, can you state what the expense of making that pier would be?—That may somewhat depend upon whether or not the channel should be excavated all along the pier to the same depth as the point or head of it; if it was simply to extend the pier out from Newhaven Pier to 10 feet depth of water, the expense would be considerably lessened; there is first 41,434*l.*, with 10 per cent. contingencies added, makes 45,577 *l.* as the expense thereof.

1441. Does that include excavation?—No, that does not include the excava-

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tion, that is with a view of running out a low water pier from Newhaven Pier to the depth of 10 feet at low water of spring tides; but in the event of excavating to an equal depth throughout in order to bring vessels close in shore, the additional expense would be, first, 7,012*l.* 10*s.*, with 10 per cent. contingencies added would be 7,714*l.* more.

1442. What accommodation would you give to the steam vessels, provided you do not so excavate the channel?—There is very little difference in depth for 300 feet southwards from the point of the pier, so that actually, except at the very lowest stream tides, steam vessels could float for 300 or 400 feet alongside of the pier at low water.

1443. Would you, under those circumstances, propose to erect a western breakwater?—That might depend upon circumstances; I would first carry out the low water pier, and as I found that operate, I would construct a breakwater accordingly; and even if the whole plan were to be carried into effect, the breakwater would be the last thing I would do in order to see the effect of the low water pier.

1444. Then the sum you have mentioned relates to the eastern pier, and does not include the western breakwater?—Exactly so; the expense of the western breakwater would be, with contingencies, 10,864*l.* 16*s.* 6*d.*

1445. Have you seen Sir John Rennie's plan?—I never have. I have been accused of copying from Sir John Rennie's plan; but I state decidedly before this Honourable Committee, that I never heard of that plan till lately, nor have I yet seen it up to the present time; but at the same time I consider it is not a little gratifying to myself to find that two engineers, unknowingly to each other, have actually adopted a plan upon the same principle.

1446. As you have studied the set of the tides, and the manner in which the deposit is made by the flood and the ebb tides, can you state whether there is any deposit at the back of the new pier of Leith, and whether it has accumulated fast since the extension of the pier?—It is a twelvemonth since I last made my remarks upon it, and I cannot speak with certainty upon that question; my impression is, that generally, over the sands of Leith, there is very little difference; whether there is an accumulation of sand to the east of the breakwater, I cannot say.

1447. Is there not an accumulation behind the old pier of Leith?—I rather think not, but I cannot speak decidedly on that point.

1448. Is there any accumulation on either side of the present Newhaven Pier?—There probably may be from six inches to a foot on the east side of it, but on the west side of it, it is quite the reverse; the channel has been deepened.

1449. You mean to say that on the west side the water is deeper than when it was first founded?—Yes; it is entirely a mistake that there ever was six feet of water at Newhaven Pier at low water of spring tides; it must have been at neap tides.

1450. In point of fact, is any of the peat that comes from Blair Drummond Moss ever found inside of Newhaven Pier, or along the beach in the neighbourhood?—I have not seen a vestige of it.

1451. You say upon the eastern part of the pier there may be a foot or six inches of sand; has that accumulated gradually, or does a gale of wind from the east, or any particular state of the weather and tide, sweep it off again, or does it continue gradually accumulating?—It must have increased gradually by the tides from the east and the east winds, but in small portions; and my impression is, that since Leith weir has been extended, there has been no increase.

1452. As there has been an increase of from a foot to six inches at the back of Newhaven Pier, do you think there would be an accumulation also at the back of the pier that you carried out at ten feet, at low water?—I do not apprehend there would to any extent, because the extension of Leith Pier and the weir together prevents that. I have already stated that the sand-bank is lessening between Leith entrance and Newhaven Pier; it will therefore be only by the flowing tide outside the Black Rocks that any sand will move upwards.

1453. Suppose the proposed harbour were erected at Trinity, do you think there would be any apprehension of silting up inside of that breakwater, or upon either side of the piers to be extended from each wall of the floating dock?—No, I think not.

1454. From neither tide?—From neither tide.

1455. Have

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1455. Have you examined the estimates laid before the Committee with respect to the floating dock and the breakwater of Trinity?—Yes, I have considered the estimates.

1456. Do you consider, as a professional man, that that work can be executed for the sum stated?—I question much whether it can be executed for three times the sum, or whether it can be executed at all; I do not see how they can make their wet dock water-tight; besides, no engineer of experience would ever think of carrying works of that description into deep water. I would say that the form of Mr. Cubitt's works, if their construction were better, is a much more sensible sort of a plan. By first enclosing a portion of the sea, and then excavating docks close in shore, it could be done at one-third of the expense. Mr. Stevenson's plan at Granton is somewhat upon that principle; but no engineer, if he knew by experience the cost of deep-water founding, would ever think of carrying such a body of works into deep water.

1457. Have you ever yourself founded in deep water?—I have not founded in deep sea-water, but I have founded in quicksand where I had 30 feet depth of cutting, where it was more difficult to form coffer-dams than it would be in that situation.

1458. As you have never yourself founded in deep water, the opinion you have given is derived more from that of others than from your own personal experience?—Partly from the opinion of others and partly from my own experience. I had occasion to erect sea-walls and also bulwarks; but I know well how to compute the cost of coffer-dams. I know the expense of constructing stone, wood and iron work in every way. I do not say that the building of the works are impracticable; but I do not see how it is practicable to make tight the wet dock, without extensive coffer-dams, but at an enormous expense.

1459. Are you aware of the nature of the bottom upon which it is proposed to form the floating dock at Trinity?—It is a hard clay.

1460. Were you aware that there was no intention of using coffer-dams there?—I was not aware of it.

1461. Do you think that having a bottom of the nature you have described, stones put upon edge, from nine to four feet long, to form the foundation would answer the purpose?—I do not think they could puddle the wet dock without a coffer-dam; it would be quite impossible that any cement would take hold so fast as to retain the clay.

1462. It is proposed to slip these stones down into the water, placing them as correctly as may be, and then to fill up in the inside of them, and at last to place a bank of clay, which is to act as a puddle upon the outside of it?—If I understand aright, there are first stones to be put down on edge, and within that again there is to be a wall, and between these double walls, clay is to be thrown in and puddled.

1463. Have you seen the particulars of the estimate?—I have not seen the particulars.

1464. Do you know whether coffer-dams are included?—I know this, that if coffer-dams are included in the estimate, there can be nothing allowed in it for the building of the works.

1465. Supposing it is not intended to use coffer-dams, but suppose it is intended to form the foundation of these walls by stones put on their edge from nine to five feet long without any cement, and then to fill up inside of them, carrying up the structure in that manner, and then putting a bank of clay as a puddle upon the outside, and afterwards by having the means of excluding the water when the structure shall have got a certain height so as to be able to form the inside of the wall when it is quite dry, do you think that is a feasible and proper mode of constructing such a work?—Certainly not.

1466. What knowledge of the particulars of the estimate have you which enables you to come to the conclusion that it could not be made for the estimate?—I have here a printed report of the plan of the harbour; the engineers have taken good care that neither sections nor detailed estimates shall accompany it; but it is stated decidedly that the whole is to be of substantial stonework, that there are to be check piers founded upon arches, and that there is to be a substantial breakwater, the inside of which is to form a wharf wall where vessels can lie at all times of the tide. I have gone over those works, and without allowing any thing for the expense of coffer-dams or any preparatory measure for founding, my estimate for the stone work alone, according to the

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prices I allow for my low water pier, amount to 282,558*l.* I have a note by an engineer furnished to me before I left Edinburgh, who has constructed several sea works of the kind; he endeavoured to make some estimate of the works according to their description, and allowing for coffer-dams, but not for the wet dock; his estimate is 441,587*l.* 10*s.*, but he is also of opinion with me that he does not think the wet dock can be constructed without an enormous expense so as to be water-tight, and he makes no allowance for that in his estimate.

1467. Are the Committee to understand that you are not at all aware of the mode by which they propose to found under water, whether it is by coffer-dams or by caissons?—I do not think they could construct their inverted arches with caissons, it would require coffer-dams; and the very exposed situation of these check piers is such, that the work would require to be of the best and of the most expensive description of masonry.

1468. With respect to the different works that you have been employed in, you stated that you gave in a proposition for constructing a suspension bridge across the Queen's Ferry, do you recollect the width of the Queen's Ferry?—Five thousand eight hundred and thirty feet is the whole extent, that is, betwixt the abutments at high water mark on each side.

1469. That never went further than the mere proposition?—It went no further than the plan and report. I merely stated it to this Honourable Committee, in order to show that at an early period my attention was called to the various currents and soundings of the Forth.

1470. Do you know Mr. Gibb as an engineer?—I am not acquainted with him. I have heard repeatedly of him more as a contractor than as an engineer.

1471. Do you consider him a person that must have experience in his profession?—A good deal of experience in his profession.

1472. And particularly in harbours?—In harbours.

1473. As an engineer?—More particularly as a contractor. I have not heard of any works that Mr. Gibb has designed as an engineer. I have heard of his having executed works for Mr. Telford and others, but I have never heard of him as an engineer, or as having designed works of his own; a contractor executes according to the directions of the engineer, and the engineer is responsible, not the contractor, if he performs his part agreeable to his instructions.

1474. Is there any thing further that you wish to state to the Committee?—I would beg leave to impress upon this Honourable Committee, that the Frith of Forth is infinitely the best inlet of the sea on the whole eastern coast of Great Britain, where ships at all times of tide, and almost under every circumstance of wind or weather, are able to obtain shelter, but in the whole of this Frith, extending sixty miles inland, there is not a sufficient harbour; the want of which is most severely felt along the whole range of coast from the one extremity of the island to the other. Ships, for instance, overtaken by gales from the north, south or east, can run with perfect safety into this Frith, when they dare not attempt the shore in any other quarter, and consequently every facility which can be afforded to the navigation of this important estuary, either by affording the necessary accommodation to the shipping which frequents it, or shelter to the North Sea fleets which often congregate in the Frith, and to His Majesty's navy in the event of war, becomes in reality an object of the first national importance. With the permission of the Committee, I shall read a letter regarding the plan of my harbour, written to me by Captain David Gourlay, of Leith, who, as a sailor, has not only been longer, but is better acquainted with the navigation of the Forth than any person now living, and on whose judgment the Committee may depend. I may mention, that there was a public meeting of the inhabitants of Edinburgh and Leith called by requisition to support my plan, and to recommend it to the Government: Captain Gourlay intended to have been present, but he sent me this letter, assigning the reason why he could not attend, and it was accordingly read by the chairman at the meeting:—"Leith, 3d April 1835. Dear Sir,—I have to regret that, from circumstances which I could not foresee, I shall be deprived of the pleasure I had anticipated in bearing my humble testimony to your plan for improving Leith Harbour. It appears to me to be upon so general a principle, as must satisfy all who are only anxious for a great public benefit, as it will afford to all classes of vessels an easy ingress and egress, with

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with a sufficient depth of water, as it may be entered with perfect safety and with any wind, if a vessel can carry or command sail. I am very decided in my opinion against a low water pier at the present entrance, and that upon one side only, as every foot you carry out a building you increase the velocity of the tide, which makes it very dangerous for sailing vessels falling down upon it with the ebb tide, which bends down towards it long before high water, and in light or variable winds, and also with strong scant winds, the bad effects of which are often too evident, even with the present weir. I have lately experienced an instance of this, when our vessel Camilla, in going out of the harbour last voyage with a scant wind and blowing strong, and though assisted by the harbour steam vessel, she fell down upon the weir, but luckily, though touching upon, she went over it; but had she been her own length nearer the end of the pier, she must have stuck fast; and in that event it is probable she might have been completely damaged. A low water pier, therefore, at the present entrance, in my opinion, would render the ingress and egress of Leith Harbour so dangerous to sailing vessels, that many accidents would occur without the smallest benefit to this numerous class of vessels, though some trifling advantage might be gained, but that even at times only, in moderate weather, in embarking or landing passengers: a very poor remuneration for such a risk. Your plan also exhibits a great improvement upon the property belonging to Government, and will afford access to it by its vessels without the imminent risk they have hitherto run in passing through the old harbour to the wet docks, such sharp built vessels being quite unfit for laying upon the ground; and I should suppose this to be a matter very worthy of the consideration of the Government, as well as that of the numerous respectable merchants of Edinburgh and Leith connected with shipping, and induce them to unite together in promoting your plan, and thereby making the port of Leith a port worthy of such a metropolis, and having the safest and best harbour upon the east coast of Scotland. I beg you will excuse this lengthened letter, as, upon speaking and writing of the improvement of Leith Harbour, I know not where to end.—I am, dear Sir, your most obedient servant, *David Gourlay.*"

Lieutenant *George Crichton*, R. N., called in; and Examined.

Lieut. *George Crichton.*

1475. HAVE you had any opportunity of becoming acquainted with the management and business of the Leith Harbour dues?—Yes; I have been in the management of one of the most extensive companies in the port, that pay nearly a sixth of the whole revenues of the harbour.

1476. Have you any observations to make to the Committee upon the nature or amount of those dues?—They are excessively oppressive, both in their amount and in the manner in which they are levied.

1477. With regard to the manner in which they are levied, will you point out to the Committee any thing that there is, in your opinion, objectionable in the present mode of levying those charges?—In the first place, the dock dues are levied on steam vessels which cannot enter the docks, and no exertion has been made to remedy that defect. There are also various duties or charges levied in the name of fees, which we consider are not authorized by any Act of Parliament, and which, on small vessels, amount to nearly as much as the regular dues.

1478. What are those dues?—They are called berthage and flaggage, and on a small vessel they amount to nearly as much as the ordinary harbour dues. The beaconage and anchorage on the vessels, the harbour dues alone, is about $1\frac{1}{2}d.$ a ton, independent of the dock dues; the dock dues vary from $6d.$ up to $2s.$ a ton, according to the ports from which the vessels come. Vessels from short distances within the Frith of Forth pay $4\frac{1}{2}d.$ a ton; the dock dues are regulated by the 23d section of the Act of 39th of George III. chap. 44; there are six different classes of rates, the highest is $2s.$ I have stated that the old harbour dues are $1\frac{1}{2}d.$ a ton; that is, for beaconage and anchorage. Vessels pay beaconage and anchorage whether they enter the harbour or not; and berthage and breakage were fees originally levied by the harbour master, but gradually rose to such an amount as to be considered too large to be a perquisite for him, and they are now continued for the use of the corporation.

1479. Are you speaking from your own knowledge?—I am in possession of the minute of the town council, explaining the whole origin of these fees, the large amount which they had increased to, and the inexpediency of allowing

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them to be applied to the shore master as a fee, and to consider how they could legally restrict the fees, and still levy the whole burthen upon the shipping.

1480. Can you furnish the Committee with that minute?—In August 1816 there is a full report from the city clerks of Edinburgh, stating the object of the remit, being to consider how they could best modify those fees without affording any relief to the trade or shipping of the port.

1481. Does that appear upon the face of the minute?—It does.

1482. Have you any knowledge of the nature of the harbour dues levied at the docks of Aberdeen and Dundee?—Yes; I have procured tables at different times with a view of comparing them; in Leith there are dock dues, and in Aberdeen there are none; there are no docks yet constructed at Aberdeen.

1483. Is there any difference between the nature of the dues levied upon the ships going into the port of Leith, and upon the ships going into Aberdeen and Dundee?—Taking the whole dues together, they are heavier in Leith than in either Dundee or Aberdeen.

1484. Are the dues of a different kind in the port of Dundee or in the port of Aberdeen from what they are in the port of Leith?—Yes; the dues both in Aberdeen and Dundee are distinctly defined by the Act of Parliament, and levied under the authority of commissioners; and there are none of those objectionable charges, in the shape of fees, which are levied at Leith.

1485. Are there fees now levied at Leith over and above the fees appropriated to the use of the corporation?—The fees now cease to be applied to the purpose for which they were originally levied, but the trade is not relieved from the burden of them.

1486. How are the officers paid that were paid by fees?—They are paid under the authority of an Act of Parliament, in a different manner by the Dock Act of the 6th of George IV.

1487. Are there any fees now levied by the officers upon their own account?—They are entirely abolished by the dock commissioners.

1488. Is the amount of the duties levied upon the ships entering the port of Leith much larger than would be levied upon the same ship at the port of Dundee or Aberdeen?—The aggregate dues are more upon a ship entering Leith than either Aberdeen or Dundee.

1489. Can you state how much more?—About an eighth or a tenth more than Dundee.

1490. You are connected with one of the smack companies at Leith, and you have vessels sailing from London to Leith and from Leith to London every week?—Yes.

1491. Can you state what is the amount of port charges upon one of your vessels in the port of London and in the port of Leith?—Including shore dues and all the dues together, the charges in Leith are nearly double what they are in London.

1492. Do you include the London Dock dues?—We do not enter the docks in either case.

1493. Does the same remark apply to the steam vessels?—Yes.

1494. Do you conceive that the impost of the merk per ton is one peculiarly prejudicial to the commerce of the port of Leith?—I consider it peculiarly prejudicial both from its nature and amount, but particularly from its amount being double the amount of the shore dues themselves upon many goods.

1495. What is the amount of the merk per ton?—I have known the amount, upon bulky goods, come so high as from 3*s.* to 4*s.* a ton, and I have known the shore dues and merk per ton amount to 7*s.* 6*d.*, while the whole freight of the goods from London was only 10*s.*

1496. What description of goods?—Hides and skins, and that description of bulky goods.

1497. Then, in your opinion, that impost applies more unequally than other imposts of the port of Leith?—Yes.

1498. Is the merk per ton levied upon hides at the present time?—There have been some changes proposed by the town council within a month or two; but we have no security for that rate remaining. They claim the power of altering it at their pleasure; but for 20 years past the rule has been to levy according to the bulk.

1499. Are you aware whether there has been any change in the amount charged upon hides and articles of that description?—I am aware that there was a change contemplated; but I do not know whether that has taken effect.

1500. Have not you seen the minutes upon the subject?—I saw in the newspaper

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paper the minutes regarding the change, and I understood that the creditors interposed an obstacle to it.

1501. In point of fact, has any reduction yet taken place?—Not that I am aware of, although I know it was contemplated.

1502. Are you of opinion that the corporation of Edinburgh have taken proper care of the harbour of Leith by keeping it in repair?—My experience has been very much the reverse.

1503. Will you state in what way you believe they have neglected to discharge that duty?—I have documents here so far back as 12 years ago, detailing, on the part of the shipping company for which I am manager, and the ship-owners' society generally, the evils which they laboured under. In the course of my professional service, I have had an opportunity of seeing many harbours similar to Leith, particularly on the north coast of France, where there is a strong resemblance, both Calais and Boulogne, and in other parts, and I never saw one yet, where there was trade to any extent, where the obvious course of cutting a channel, through which to convey the backwater, and to obtain the deepest run to the tideway of the sea or the estuary in which it was situated, had not been adopted; while at Leith, after having been some years concerned in the management of shipping here, I found daily inconvenience from the refusal of the corporation to adopt any means attended with a comparatively trifling expense, to make the water of Leith subservient to the scouring of the channel.

1504. Is your complaint against the corporation of Edinburgh that they have not been sufficiently attentive to any new plan presented to them in order to improve the harbour of Leith, or that they have neglected to maintain the harbour of Leith in as good a state as it has been in former times?—In the year 1824, to which I particularly allude, while vessels were detained in the harbour, which only drew nine feet water, the sum expended upon the whole harbour of Leith, out of 10,000*l.* of revenue derived from it, was 85*l.* Until 1824, when these proceedings originated, the harbour had got worse, from no means being taken to remove the sand on the bar, and to create a channel through it to the deep water in the Forth. I had repeatedly, along with others, urged the employment of dredging-machines, or any other simple mode of cutting a channel through to the estuary of the Forth. At last, by a strong remonstrance from the ship-owners' society, dated 3d April 1824, in which they threatened the erection of a rival harbour unless something was immediately done, Mr. William Chapman, engineer of Newcastle, was sent down by the Board of Admiralty to survey the port and to report upon it.

1505. Do you mean to say that the corporation of Edinburgh up to that day had neglected all remonstrances made to them for the improvement of the harbour?—With one or two trifling exceptions, that they had altered the system of ballasting which afterwards degenerated into an abuse, they had done nothing whatever from the year 1814 to the year 1824.

1506. Will you state what was done upon Mr. Chapman's report?—At that time it had been proposed not merely to dredge out the harbour, but to extend the protecting pier by dredging operations across the sand-bank. Mr. Chapman recommended not only that that should be done, but that a breakwater should be erected to the westward. The breakwater has been executed, but the pier has only been extended two-thirds of the way.

1507. Will you state how much money has been laid out upon the harbour of Leith, including the docks, upon the security of the corporation of Edinburgh?—The sum laid out upon the docks, with interest, was nearly 300,000*l.* borrowed upon the rates raised for the purpose of making these docks, at a time when the question arose whether the old harbour should be enlarged in the ordinary way, or whether new docks should be made for the additional accommodation of the shipping.

1508. Have not those rates been insufficient for the purpose?—The whole rates have not been insufficient, but by obtaining the Act in a particular manner, a separation was made between two sets of revenues; and long after the docks were built, the corporation were receiving a large surplus revenue from the harbour, and applying them to other purposes. I have an abstract showing how the account stands, made out under the authority of the commissioners of the docks in June 1833.

1509. Will you deliver in that paper?—[*The Witness delivered in the same, which is as follows:*]

STATEMENT respecting the HARBOUR DUES at the Port of *Leith*, from Martinmas 1788 to
Special Committee of the Harbour and Dock

	1. Produce of Shore Dues.			2. Repairs, Improvements, &c. Ordinary.			3. Under 28 Geo 3. c. 58. and 7 Geo. 4. c. 105.			4. Net Produce, after paying Repairs.			5. Three-fourths of Average Revenue, under Act 28 Geo. 3.			6. Annual Surplus of Net Produce above three-fourths Average Revenue.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Year to Martinmas 1789	3,517	13	4	835	19	11	1,943	11	7	738	1	10	2,677	4	–	1,939	2	2
1790	3,418	1	5	655	13	4	1,943	11	7	818	16	6	2,677	4	–	1,858	7	6
1791	4,407	10	–	751	11	6	1,943	11	7	1,712	6	11	2,677	4	–	964	17	1
1792	3,979	14	10	1,219	12	3	1,943	11	7	816	11	–	2,677	4	–	1,860	13	–
1793	3,155	18	9	648	11	11	1,943	11	8	563	15	2	2,677	4	–	2,113	8	10
1794	2,988	7	6	349	17	9	1,943	11	8	694	18	1	2,677	4	–	1,982	5	11
1795	3,023	11	8	259	16	7	1,943	11	8	820	3	5	2,677	4	–	1,857	–	7
1796	3,661	9	2	259	5	1	525	5	4	2,876	18	9	2,677	4	–	199	14	9
1797	3,813	4	5	264	2	4	867	18	3	2,681	3	10	2,677	4	–	3	19	10
1798	4,323	5	9	246	6	5	485	10	1	3,591	9	3	2,677	4	–	914	5	3
1799	5,264	4	7	42	18	–	739	19	5	4,481	7	2	2,677	4	–	1,804	3	2
1800	5,699	10	7	970	5	11	-	-	-	4,729	4	8	2,677	4	–	2,052	–	8
1801	6,496	2	7	802	19	6	-	-	-	5,693	3	1	2,677	4	–	3,015	19	1
1802	5,622	6	6	494	2	9	-	-	-	5,128	3	9	2,677	4	–	2,450	19	9
1803	5,732	1	–	2,114	15	7	-	-	-	3,617	5	5	2,677	4	–	940	1	5
1804	6,276	9	9	3,249	14	4	-	-	-	3,026	15	5	2,677	4	–	349	11	5
1805	6,506	18	6	1,237	18	8	-	-	-	5,268	19	10	2,677	4	–	2,591	15	10
1806	6,642	19	4	796	4	8	-	-	-	5,846	14	8	2,677	4	–	3,169	10	8
1807	6,617	2	11	357	2	–	-	-	-	6,260	–	11	2,677	4	–	3,582	16	11
1808	6,396	4	9	404	10	9	-	-	-	5,991	14	–	2,677	4	–	3,314	10	–
1809	7,155	4	1	229	–	5	-	-	-	6,926	3	8	2,677	4	–	4,248	19	8
1810	9,712	12	7	300	11	4	-	-	-	9,412	1	3	2,677	4	–	6,734	17	3
1811	7,979	4	11	345	2	4	-	-	-	7,634	2	7	2,677	4	–	4,956	18	7
1812	8,580	7	–	643	13	10	-	-	-	7,936	13	2	2,677	4	–	5,259	9	2
1813	8,385	14	5	172	13	9	-	-	-	8,213	–	8	2,677	4	–	5,535	16	8
1814	9,255	17	8	661	18	10	-	-	-	8,593	18	10	2,677	4	–	5,916	14	10
1815	7,762	4	2	175	6	1	-	-	-	7,586	18	1	2,677	4	–	4,909	14	1
1816	6,892	16	5	245	16	–	-	-	-	6,647	–	5	2,677	4	–	3,969	16	5
1817	10,612	10	6	925	5	10	-	-	-	9,687	4	8	2,677	4	–	7,010	–	8
1818	12,184	4	–	347	3	11	-	-	-	11,837	–	1	2,677	4	–	9,159	16	1
1819	10,661	1	6	532	8	9	-	-	-	10,128	12	9	2,677	4	–	7,451	8	9
1820	9,372	8	8	2,096	7	6	-	-	-	7,276	1	2	2,677	4	–	4,598	17	2
1821	8,932	5	8	872	7	5	-	-	-	8,059	18	3	2,677	4	–	5,382	14	3
To 30 Sept. 1822	7,204	19	6	625	4	6	-	-	-	6,579	15	–	2,677	4	–	3,902	11	–
29 Sept. 1823	8,640	5	7	182	15	6	-	-	-	8,457	10	1	2,677	4	–	5,780	6	1
4 Oct. 1824	10,049	13	11	85	5	10	-	-	-	9,964	8	1	2,677	4	–	7,287	4	1
3 Oct. 1825	11,793	9	8	126	3	6	-	-	-	11,667	6	2	2,677	4	–	8,990	2	1
2 Oct. 1826	10,452	9	5	407	8	1	-	-	-	10,045	1	4	2,677	4	–	7,367	17	4
1 Oct. 1827	10,129	17	3	5,564	3	3	4,046	7	9	519	6	3	2,677	4	–	2,157	17	9
29 Sept. 1828	10,420	17	10	1,507	3	3	89	17	2	8,823	17	5	2,677	4	–	6,146	13	5
5 Oct. 1829	10,749	10	2	1,676	7	2	4,259	16	7	4,813	6	5	2,677	4	–	2,136	2	5
4 Oct. 1830	9,489	11	1	2,312	6	7	11,845	3	11	4,667	19	5	2,677	4	–	7,345	3	5
3 Oct. 1831	9,709	9	4	2,431	9	11	7,601	14	5	323	15	–	2,677	4	–	3,000	19	–
1 Oct. 1832	9,518	18	11	2,061	5	–	141	3	4	7,316	10	7	2,677	4	–	4,639	6	7
										243,483	10	7				145,774	15	4
										4,991	14	5				25,079	15	3
£.	323,188	11	7	40,488	17	10	44,207	17	7	238,491	16	2	117,796	16	–	120,695	–	1

Edinburgh, June 27, 1833.

Extracted from the Minute Book of the Leith Dock and Harbour Commissioners,

NOTE.

IN the above Statement the LARGE figures are (with the exceptions of Columns 9 and 10) used in all cases in a sense contrary to that pointed out in the titles of the respective Columns; thus:—

1st. In Column 4, the LARGE figures denote the deficiency of Revenue to meet the expense of Repairs and Improvements.

2d. In Column 6, the LARGE figures denote the insufficiency of the produce of the Dues, after paying Repairs, &c. to meet the £.2,677. 4. the stated three-fourths Average Revenue provided by the Act 28 Geo. 3.

3d. In Column 7 the LARGE figures denote the Compound Interest arising on the deficiency.

4th. In Column 8, the LARGE figures denote the accumulated deficiency of Revenue to meet the three fourths Average Revenue provided by the said Act.

5th. In Columns 11 and 12, the LARGE figures denote the accumulated balance in favour of the City, after deducting the Dues belonging to the Clergy, according to the rules of calculation laid down in the Minute of the Commissioners.

As

2d October 1832, prepared in return to the Resolutions contained in the Minutes of the Commissioners, at their Meeting on 25th June 1833.

7. Compound Interest arising annually on Amount of Surplus Revenue, at 4 per Cent.			8. TOTAL Amount of Annual Surplus and Interest accumulated at the close of each Year.			9. Proportion of Total Surplus at close of each Year, with Interest, assumed as Belonging to Clergy.			10. Accounted for to Clergy.			11. Balance of accumulated Surplus against, *or in favour of*, the City at close of each Year, after giving effect to Proportion, assumed as Belonging to Clergy.			12. Accounted for to Clergy.			
£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	
-	-	-	1,939	2	2	-	-	-	-	-	-	1,939	2	2	1,939	2	2	Year to Martinmas 1789
77	11	3	3,875	-	11	-	-	-	-	-	-	3,875	-	11	3,875	-	11	1790.
155	-	-	4,994	18	-	-	-	-	-	-	-	4,994	18	-	4,994	18	-	1791.
199	15	11	7,055	6	11	-	-	-	-	-	-	7,055	6	11	7,055	6	11	1792.
282	4	3	9,451	-	-	-	-	-	-	-	-	9,451	-	-	9,451	-	-	1793.
378	-	10	11,811	6	9	-	-	-	-	-	-	11,811	6	9	11,811	6	9	1794.
472	9	-	14,140	16	4	-	-	-	-	-	-	14,140	16	4	14,140	16	4	1795.
565	12	8	14,506	14	3	79	17	11	39	18	11	14,586	12	2	14,546	13	2	1796.
580	5	4	15,082	19	9	84	13	9	42	6	10d.	15,167	13	6	15,125	6	7d.	1797.
603	6	5	14,772	-	11	453	15	7	276	17	9d.	15,225	16	6	15,048	18	8d.	1798.
590	17	7	13,558	15	4	1,193	11	10	596	15	11	14,732	7	2	14,155	11	3	1799.
542	7	-	12,049	1	8	2,062	2	11	1,031	1	5d.	14,111	4	7	13,080	3	1d.	1800.
481	19	3	9,515	1	10	3,351	-	3	1,675	10	1d.	12,866	2	1	11,190	11	11d.	1801.
380	12	-	7,444	14	1	4,465	9	-	2,232	14	6	11,910	3	1	9,677	8	7	1802.
297	15	9	6,802	8	5	5,020	1	11	2,510	-	11d.	11,822	10	4	9,312	9	4d.	1803.
272	1	11	6,724	18	11	5,360	14	7	2,680	7	3d.	12,085	13	6	9,405	6	2d.	1804.
268	19	11	4,402	3	-	6,611	17	6	3,305	18	9	11,014	-	6	7,708	1	9	1805.
176	1	9	1,408	14	1	8,144	3	3	4,072	1	7d.	9,552	17	4	5,480	15	8d.	1806.
56	6	11	2,117	15	11	9,903	1	4	4,951	10	8	7,785	5	5	2,833	14	9	1807.
84	14	3	5,517	-	2	11,624	19	9	5,812	9	10d.	6,107	19	7	295	9	8d.	1808.
220	13	7	9,986	13	5	13,789	11	7	6,894	15	9d.	3,802	18	2	3,091	17	7d.	1809.
399	9	4	17,121	-	-	17,035	2	2	8,517	11	1	85	17	10	8,603	8	11	1810.
684	16	10	22,762	15	5	19,699	5	8	9,849	12	10	3,063	9	9	12,913	2	7	1811.
910	10	2	28,932	14	9	22,591	-	9	11,295	10	4d.	6,341	14	-	17,637	4	4d.	1812.
1,157	6	2	35,625	17	7	25,709	-	3	12,854	10	1d.	9,916	17	4	22,771	7	5d.	1813.
1,425	-	8	42,967	13	1	29,104	1	4	14,552	-	8	13,863	11	9	28,415	12	5	1814.
1,718	14	1	49,596	1	3	32,232	2	2	16,116	1	1	17,363	19	1	33,480	-	2	1815.
1,983	16	10	55,549	14	6	35,109	6	5	18,348	12	6	20,440	8	1	37,201	2	-	1816.
2,221	19	9	64,781	14	11	39,317	14	1	21,886	11	8	25,464	-	10	42,895	3	3	1817.
2,591	5	5	76,532	16	5	44,554	6	8	26,425	19	4	31,978	9	9	50,106	17	1	1818.
3,061	6	3	87,045	11	5	49,317	1	7	30,463	11	7	37,728	9	10	56,581	19	10	1819.
3,481	16	5	95,126	5	-	53,129	6	1	33,521	13	3	41,996	18	11	61,604	11	9	1820.
3,805	1	-	104,314	-	3	57,407	11	2	37,015	12	3	46,906	9	1	67,298	8	-	1821.
4,172	11	2	112,389	2	5	61,264	17	7	40,057	5	2	51,124	4	10	72,331	17	3	To 30 Sept. 1822.
4,495	11	3	122,664	19	9	66,027	11	11	43,971	13	5	56,637	7	10	78,693	6	4	29 Sept. 1823.
4,906	12	-	134,858	15	10	71,583	11	7	48,045	8	4	63,275	4	3	86,213	7	6	4 Oct. 1824.
5,394	7	-	149,243	4	11	78,042	19	3	54,187	5	6	71,200	5	8	95,055	19	5	3 Oct. 1825.
5,969	14	7	162,580	16	10	84,111	16	6	59,301	18	3	78,469	-	4	103,278	18	7	2 Oct. 1826.
6,503	4	8	166,926	3	9	88,176	4	10	62,373	18	8	78,749	18	11	104,552	5	1	1 Oct. 1827.
6,677	-	11	179,749	18	1	94,110	11	2	67,276	3	1	85,639	6	11	112,473	15	-	29 Sept. 1828.
7,189	19	11	189,076	-	5	100,336	4	8	72,428	9	1	88,739	15	9	116,647	11	4	5 Oct. 1829.
7,563	-	10	189,293	17	10	105,941	8	6	76,917	6	8	83,352	9	4	112,376	11	2	4 Oct. 1830.
7,571	15	1	193,864	13	11	111,597	2	1	81,412	1	-	82,267	11	10	112,452	12	11	3 Oct. 1831.
7,754	11	9	206,258	12	3	117,494	14	11	86,102	5	10	88,763	17	4	120,156	6	5	1 Oct. 1832.
91,944	19	11																
6,381	7	9																
85,563	12	2																

(signed) *Arch^d Bruce*, Accountant.

and certified as a true copy.

G. W. F. Pitcairn, pro Clerk.

As to Columns 9 and 10, it may be mentioned, that, as directed by the Minute of the Commissioners, Column 9 shows the accumulated amount of the Clergy's share of the Surplus, on the supposition that they are entitled to two-fifths of Annual Amount thereof, while Column 10 shows, in a similar way, the Clergy's share, on the supposition that, until Martinmas 1815, only one-fifth of the said Annual Surplus was accounted for to them; but the proportion of Annual Surplus paid to the Clergy, after Martinmas 1815, is, in Column 10, held to be two-fifths, as in Column 9. The Clergy's share of the Dues, however, is not burdened with any part of the extra expenditure on the Pier from 1826 to 1832, beyond the interest or modified annual equivalent with which they are chargeable by the Statute of 7 Geo. 4, under which that extra expenditure was made.

The rate of Interest throughout is assumed at 4 per cent. without abatement for Property-tax, and which has been taken as a fair average of the value of money during the period embraced by the statement.

On looking into the Record of the Improvements executed betwixt 1789 and 1799, it appears that a piece of ground, in the neighbourhood of the old drawbridge, was laid out as a feuing stann, and for which some small feu duties were received, (which property formed an offset to the expense incurred in these improvements,) though their amount cannot at present be precisely ascertained. On the other hand, however, it may be noticed, that the fund for the execution of these improvements was, for the greater part, raised by the sale of Life Annuities, on terms which now appear to have been disadvantageous to the City.

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1510. Are not the accounts annually rendered and made public?—They were not made public till the Burgh Act of 1819; the dock accounts are not published; the harbour accounts, so far as they form part of the corporation trust, are published in the same way as the accounts of the burgh.

1511. Are not the city of Edinburgh liable for all the money that has been raised for the harbour and the docks?—They are liable.

1512. Can you state to the Committee what would have been the amount of the debt remaining due by the corporation on account of the improvements at Leith in the docks and harbour if all the shore dues derived by them had been applied to diminishing that debt and to the purposes of the harbour?—The last column of this Abstract states the balance of accumulated surplus against or in favour of the city at the close of each year, after giving effect to the proportion assumed as belonging to the clergy, and that accounted for to the clergy. If they had accounted to the clergy for all that belonged to them, the accumulated surplus would have been 88,763*l.* 17*s.* 4*d.*, after paying the whole debt.

1513. According to your calculation?—According to the accountant's calculation.

1514. Does the accountant give any calculation of what they ought to have paid to the clergy?—Yes.

1515. Do you mean that they have not paid to the clergy what they ought to have paid?—No, they have not; assuming what they have really accounted to the clergy for, it leaves a surplus revenue from the port of Leith of 120,156*l.* 6*s.* 5*d.*

1516. Are you of opinion that, if the funds derived from the harbour of Leith and the dues exacted there had been applied to their proper purpose, the whole debt might have been paid off and further improvements might have been made?—Yes.

1517. Is there any item in the account you have given in, showing the annual charge of interest upon the money borrowed upon the docks?—I do not mean that it would have paid off the dock debt.

1518. Does it appear that, if the interest of the dock debt had been paid, there would have been any surplus?—Yes.

1519. In the year 1824 you stated, that out of 10,000*l.* derived from the port of Leith, there was only 85*l.* applied to the purpose of the harbour; how was the rest applied?—In that particular year the dock dues may not have been themselves quite sufficient to pay the interest and the sinking fund upon the debt, but the deficiency would not be above 2,000*l.*, so that there would be 8,000*l.* in that year applied to the clergy and to the ordinary purposes of the city of Edinburgh.

1520. The chief charge you bring against the corporation of Edinburgh is, that they do not use properly the back-water, and have not employed skilful engineers?—From 1801, when the docks were built, up to 1824, when Mr. Chapman was employed, there was no engineer employed with a view to extensive improvements. Mr. Rennie was consulted upon one or two occasions.

1521. Have not they consulted skilful engineers from time to time as to works necessary for preserving and improving the harbour?—They have.

1522. Have they acted upon the suggestions of those engineers?—In some cases they have and in others they have not.

1523. Will you mention any suggestion of any engineer which, to your knowledge, has been made and which they have neglected?—The plans which Mr. Chapman pointed out in 1824 as essential to the improvement of the port and to the accommodation of steam vessels have not been executed.

1524. Were not those very expensive works?—No, they were not, compared to the demands of the shipping and trade of the port.

1525. How much money was required for it?—It would have taken about 16,000*l.* or 18,000*l.* to complete the whole in the manner Mr. Chapman pointed out, and it would have taken 20,000*l.* more to have made a proper entrance into the present wet docks within those piers, which he pointed out at the time was absolutely necessary for the accommodation of the increasing trade by steam vessels.

1526. Do you know what is the amount of the port dues at Aberdeen; are they not higher than at Leith?—I have not had ships at Aberdeen; but I believe that, with the dock dues, the dues are higher than at Aberdeen.

1527. What is the amount of the merk per ton, and how much does it produce

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duce in a year?—The gross produce has been between three and four thousand a year.

1528. What do you estimate the value of all the goods imported annually into the port of Leith?—I can give no idea of the value; a duty of that kind may not be felt upon a bale of silk, but it may become very heavy upon a bale of leather.

1529. Can you state the per centage which the merk per ton bears to the freight which your company pays in the course of a year?—I think the freight of goods of our company will be about 20,000*l.* a year, out of which the merk per ton will be about 600*l.* or 800*l.* a year.

1530. How much would the merk per ton be upon a tun of wine?—Upon a tun of wine it would be about 14*d.*

1531. Upon a ton of hides?—Upon a ton of dried hides it would be about 2*s.* 6*d.* to 3*s.*, according to the nature of the hides and skins.

1532. Upon a bale of cotton?—About 3*s.* 4*d.* per ton; that is, by charging the bulk instead of the actual weight.

1533. Upon a ton of timber, what would it be?—About 1*s.* 2*d.* per ton.

1534. Upon a ton of bark?—If in general ships, it would amount, formerly, to upwards of 3*s.* a ton.

1535. Do you think the merk per ton at all injures the wine trade in the port of Leith?—On such an article as wine, which is imported in large quantities by merchants upon the spot, it may not; but in the case of wine not in large quantities, and sent coastways, it does injure it, because they naturally wish to get their goods conveyed at the cheapest rate, and this toll levied at the port of Leith operates injuriously.

1536. Do you believe that the wine trade in the port of Leith is lessened by the merk per ton?—Yes, I believe the very name of an obnoxious duty of any kind is injurious to the trade of any place.

1537. Do you think it injures the West India trade?—Yes, I know it does.

1538. What is the merk per ton upon sugar?—About 14*d.*

1539. Are the Committee to understand that, when you say it is injurious to the trade, you have in view the transit trade?—The transit trade more particularly, but it injures all the trade.

1540. Do you know what proportion the transit trade of Leith bears to the amount of the importations for Leith and Edinburgh themselves?—Probably two-fifths will be transit trade, and three-fifths for the consumption of Edinburgh and Leith.

1541. Are you of opinion that, if the dues were lowered, it would increase the trade of Leith, especially the transit trade?—I have not the smallest doubt of it.

1542. Are not you the author of several publications against the corporation of the city of Edinburgh?—I have written two or three pamphlets with regard to the port.

1543. Did not you come up last year, or the year before last, in a deputation from Leith to the Government respecting the Leith docks?—Yes, both last year and the year before.

1544. Can you state what was the arrangement then proposed by the Government in case a company could have been formed at Leith with sufficient confidence in the proceeds of the harbour dues to undertake those necessary improvements?—Yes; at the time that the affairs of the city of Edinburgh were very much involved, in 1833, and the impending bankruptcy of the city appeared certain, it seemed a favourable opportunity to the Lords of the Admiralty, who had a voice in the management of the docks and harbour, to separate the docks from the control of the corporation. Sir James Graham, then at the head of the Admiralty, saw considerable difficulty in the Government buying up the debt themselves; but he asked if I would ascertain whether parties on the spot would come forward and advance a certain sum for the docks; I think it was about 150,000*l.*; so as to enable parties on the spot to get the management of them. I mentioned to Sir James Graham that the same proposition had been made some time before, and was disliked by the people at Leith as tending to create a private interest in the docks, and therefore I did not think it would be successful, but that I should go and make the proposal. I went down to Leith, and found that my anticipations were correct, and that the arrangement could not be entered into. The Admiralty then

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made a proposal on the part of the Government; in their great anxiety to remove the docks from the corporation they offered to cancel a very considerable sum of the Government debt, provided they would make over the docks in consideration of that abatement of the debt; but the Lord Provost of Edinburgh called a meeting of the creditors of the corporation, and they declined to give up the docks to Government, even upon the favourable terms proposed by them.

1545. Upon the terms proposed, were there any persons on the part of the proprietors in Leith or its neighbourhood willing to come forward with the sum requisite for the improvement of the docks upon the faith of the increase of the trade, or was there not an unwillingness to advance money upon such a speculation?—There was an unwillingness; they had no doubt of the improvement; but they had before objected to the transfer of the docks to a private company, and they considered that the same reason was in operation still, and that nothing but a public trust was fit to manage a concern of that description, and insure the proper application of the funds.

1546. Was there not, independently of those feelings, an indisposition on the part of capitalists to engage in any such speculation as to form a company in order to buy the property of the corporation at Edinburgh, in the expectation of being remunerated by the future proceeds of that harbour?—On finding that the parties immediately interested in the port were not likely to countenance the thing, the question was never carried to the extent of finding other capitalists.

1547. Was not it considered a bad speculation?—It never got the length of considering the question of pounds, shillings and pence.

1548. Was there any difficulty in the year 1825 in obtaining persons to subscribe for the docks?—No.

1549. Was not it complained that they were obtaining shares in that company upon too favourable terms, and that after having purchased them they were selling them again at a profit?—Yes.

1550. Was not that one main ground of objection on the part of the merchants and shipowners of Leith?—Yes.

1551. Were not you of opinion, at that time, that a joint stock company upon fair and equitable terms was the best mode of managing the affairs of the dock?—Not on examining minutely into the matter; but at one time I did consider that it would be advantageous.

1552. When you pressed the Government to incur additional outlay, under the hope of improving their security by those means, was not the answer of the Government to you, "If that be clear, are not there capitalists upon the spot who will embark in this speculation?"—It was.

1553. Did they not press upon you to try the state of public opinion by going to Leith and trying to get it undertaken upon the terms you have stated?—Yes.

1554. And was not the result of that trial a failure?—Yes.

Jovis, 4° die Junii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Mr. *Patrick Dall*, called in; and Examined.

Mr. *Patrick Dall.*

4 June 1835.

1555. YOU are a master in the navy?—I am; and also a younger brother of the Trinity House, London.

1556. Have you had any opportunities of becoming particularly acquainted with the Frith of Forth?—Yes, I have; I commanded the James Watt steam packet, and was four or five years trading between London and Edinburgh; and I may also mention that I had charge of piloting King George the Fourth up the Forth during his visit to Scotland, having command of the James Watt, which towed the Royal Yacht.

1557. You are now superintendent of Leith Harbour?—I have been superintendent of Leith Harbour and Docks since 1826.

1558. Has it been your duty to ascertain accurately the depth of water at the mouth of the harbour and in the passage between the harbour and the roadstead?—It has.

1559. Have

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4 June 1835.

1559. Have you made soundings of the Forth along the south shore from Leith towards Newhaven and to the westward?—Yes; in conjunction with Mr. Leslie we constructed a chart, the original of which is in my possession now. I may state, that I have at various times verified the soundings upon that chart and found them perfectly correct upon the outside of the harbour. Here is the original chart from which the reduced one is drawn.—[*The Witness produced the same.*]

1560. Are you constantly employed upon the work of dredging the harbour and superintending other works connected with keeping it clear?—That is entirely my duty.

1561. Can you state whether any additional depth of water has been obtained in the entrance of the harbour since the late extension of the pier, according to Mr. Chapman's plan?—When I was made superintendent of Leith Docks in 1826, I found the depth of water standing three feet upon the dock sill; various banks have been removed from the outside of what was called the inner and outer bar, and last year men stood upon the dock sill dry and repaired it, thereby showing that we had removed obstacles in the outside so as to produce that additional depth of water, so that the ebb tide now recedes entirely from the dock sill.

1562. Has that been the effect of dredging?—It has been the effect of dredging, and the east pier keeps away any accumulation of sand coming in from the eastward.

1563. Has the east pier been carried out to the full extent of Mr. Chapman's plan?—No; it has not.

1564. If it were carried out to the full extent of Mr. Chapman's plan, what would be the effect?—If it were carried to the full extent of Mr. Chapman's plan, and connected with the Martello Tower, it would prevent all accumulation of sand at the mouth of the harbour.

1565. Would it enable you to keep it clear by dredging?—Yes.

1566. And to deepen the water still further?—It would. I will beg to lay before the Committee a plan showing the improvements as they have taken place—[*producing the same*]—by extending the weir out to the extent of 1,100 feet to the north and south, and then connecting that outer end of the pier with the Martello Tower; it has had the effect of damming up the sand from the eastward, and preventing it from coming across the mouth of the harbour.

1567. And preventing the formation of a bank to the north-west of the entrance of the harbour?—Yes; I may also state that, before this extension took place, there was a bank at the extremity of the pier about three feet above the datum on the plan. The datum we go upon is one foot nine inches; those banks are now reduced to about the level of the datum, and consequently one foot nine inches below the dock sill; there is now a clear space of water at the mouth of the harbour; it is on a level now.

1568. What effect has the extension of the weir to the extent of 1,100 feet had upon the accumulation of sand to the eastward of the weir?—The extension of the weir has been the means of preventing the sand running to the westward. In 1826, when I came to the docks, standing on Newhaven Pier, the sand called the Tower Bank was in a line with the outer edge of the Martello Tower, so that the damming up of the sands here has prevented the supply of sand upon the Tower Bank.

1569. In point of fact, have the works been extended to the Martello Tower?—No; all the gravel and clay which are taken up with the dredging vessel I have laid down in a line extending towards the Martello Tower.

1570. Will you describe what is the actual state of the works you have spoken of between the end of the pier and the Martello Tower?—The weir is extended out to the northward about 1,100 feet from the end of the pier, with a base of about 40 feet.

1571. What material is it constructed of?—Shingle and clay from the bottom of the harbour, taken out by the dredging machine; from the end of those 1,100 feet it is connected with the Martello Tower rocks.

1572. What is the perpendicular height of that weir?—It varies from four to five feet; after connecting the weir with the Martello Tower, the ebb tide took a direction to the eastward of the Martello Tower, and took its passage away between two of the rocks to the north-east of the Martello Tower; I again

Mr. *Patrick Dall.*

4 June 1835.

dammed it up at that place between the two rocks to the height of the rock, about three feet above the datum.

1573. What material was it dammed up with?—With the stuff taken from the bed of the harbour, clay and shingle that was raised by the dredging machine.

1574. What has the consequence of that been?—To prevent the sand being taken away to the Martello Tower bank.

1575. You stated that Mr. Chapman's plan has not been entirely completed; what part of it remains to be completed?—From the end of the pier to the extent of 1,200 feet.

1576. In the line of the weir you have constructed?—He did not mention the line he should take till he saw what effect his pier would have.

1577. Would you acquire additional depth of water by extending the pier in that direction?—We should not gain additional depth of water by it, but by dredging we should gain any depth of water that we dredged to, and maintain it, because this pier would prevent sand coming upon us from the eastward.

1578. Would there be no risk, if you were to dredge more in the present harbour, of undermining the foundations of either the original pier or Mr. Chapman's pier?—We have under-footed the old stone and wood piers, by driving piles of seven feet into the clay ground. Mr. Chapman's pier is, I conceive, about four or five feet under the ground, but in dredging there is no necessity to come so close to the piles as to do any damage; besides, the diagonal piles would prevent any of the stones coming away. But supposing it to be so, under-footing is a very easy thing by sheet piling and otherwise.

1579. Does the water wash over the pier in an easterly gale?—The spray breaks over.

1580. So as to prevent any person walking along it?—No; I have walked along it, but you get a wet coat even upon the old stone pier.

1581. Have you gained any additional depth of water since you extended the weir in the manner you have described?—Yes; the Martello Tower bank was connected with the sand to the east of the harbour; we have gained additional depth at the mouth of the harbour by taking away the sand there.

1582. What additional depth of water could you obtain and maintain by dredging with the works in the present state without any further extension of the pier?—I conceive that we could gain a considerable depth from the end of the pier to the dock sill; but that would be of no advantage to us, because we have as much water now as is required to go over the dock sill.

1583. But if you had additional depth of water at the entrance of the harbour, would it not be practicable to lower the dock sill and to excavate, if necessary, the dock itself, so as to bring the bottom of the dock to the same level as the bottom of the harbour so deepened?—I contemplate, that if our piers were extended out to the extremity before mentioned, and connected with the Martello Tower, we could carry three feet more depth of water into the dock sill by dredging.

1584. But to obtain that additional depth it would be necessary that the pier should be extended to the Martello Tower, and connected with the rock upon which the Martello Tower stands?—Either a breakwater or a pier; I call it a pier when it has woodwork upon it.

1585. You mean a breakwater, similar to the western one?—Yes.

1586. Can you state at what expense you think that additional length of pier or breakwater might be obtained?—I am not prepared to state the expense at present; but a very few thousand pounds, I should imagine, would do it.

1587. If the harbour was deepened three feet, and the dock sill lowered to the same extent, what sized vessels could safely enter the harbour?—All vessels that are at present engaged in trading to the port could enter.

1588. It would afford accommodation to all vessels of the size, and drawing the depth of water of the present trade of Leith?—Yes, at moderate tides; but it would be necessary to widen the entrance gate of the docks, as well as to deepen.

1589. You mean that it would be practicable for those vessels to enter at high water?—At high water, or an hour and a half before or after.

1590. About how many hours during the 24 do you suppose that vessels would be able to enter?—About three hours at each tide.

1591. Will you state the average depth of water upon the bar at high water from your own survey?—At very high spring tides we have got 19 feet 3 inches upon

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upon the dock sill; the average spring tides are 16 feet 9 inches upon the same; an ordinary neap tide is 12 feet 3 inches; and at a very low neap tide we have 11 feet 3 inches.

1592. Then the actual depth of the water is one foot nine inches below the figures you have given?—Yes, one foot nine inches below the dock sill.

1593. Do you know what was the depth of water upon the bar in the time of Queen Anne?—No; but I have in my possession a survey made of Leith Harbour, by Grenville Collins, in 1688; it was dedicated to the Lord Provost of Edinburgh, Sir Charles Fleming, by which it appears that the low water line extended 1,086 feet further from the point of Newhaven Pier than it does at the present moment; which shows that instead of the sands having accumulated upon the mouth of the harbour, the sea has encroached upon the land.

1594. Have you any further suggestions to make with reference to the improvement of the present harbour?—I mentioned before, that if the breakwater was extended 1,200 feet north, and again connected with the Martello Tower, the gaps between the Black Rock filled up with any loose material that would stand, such as clay and shingle, and small stones, and again eastward, from the Black Rock to the Beacon Rock, it would have the effect of preventing the sand, during ebb tide, coming and being carried away with the flood tide across the mouth to the Tower Bank.

1595. You conceive that the extension of the pier, and the connecting it by means of a breakwater with the rocks to the eastward, would afford such an additional depth of water as would be required for all the purposes of the trade of Leith?—Yes, I do.

1596. And if, in addition to that, the entrance to the docks was deepened to the same extent, and the gates widened to the extent of 55 feet, that that would supply all the deficiencies of the harbour to meet the wants of the present trade?—That is my opinion.

1597. Would the pier so extended afford any facilities for persons landing from steam vessels?—It might so take place that a vessel arriving at a very low spring tide could not land; but at all ordinary tides they would have from three to four feet water, and in neap tides from five to six, up to the east pier end.

1598. But that would only enable people to land from those vessels in small boats?—In small steam vessels.

1599. Would it be possible for the large steam vessels to come alongside that pier, except they happened to arrive at high water?—At half tide they could land.

1600. Would it be safe for a steam vessel to lie there any time?—In good weather they could lie there perfectly well, and also in strong gales from the eastward.

1601. Do you consider that it would be of material importance to the steam trade, that there should be a pier constructed of such a nature, as to allow the largest steam vessels to come alongside at any time of the tide?—Yes, it would be of great importance.

1602. You think that would be of importance for the accommodation of the steam trade, in addition to what you have stated for the accommodation of the general trade of the port?—Certainly.

1603. If the eastern pier was extended as you propose, could any boats land there when it was blowing a gale from the north-west?—We have now three landing places at the east pier, and there is very little difference in the depth of the water between them.

1604. Have you seen any of the plans for improving the entrance to the docks from the westward?—I have seen Mr. Cubitt's, Mr. Anderson's, and Sir John Rennie's.

1605. From your acquaintance with the harbour of Leith, and the navigation of the Forth, do you think that either of those plans, if executed, would be of benefit to the harbour?—If Mr. Cubitt's plan was executed to the extent that he proposes, steam vessels could come in at all ordinary times of the low tides, because this chart is taken at the very extreme of the tides.

1606. Although you are not practically an engineer, can you state whether you think the works you have proposed for improving the harbour to the eastward would cost any thing like the money that it would require to execute Mr. Cubitt's or any of the other plans?—I do not think I am qualified to answer that question.

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1607. Do you think that making a communication from the westward would have any effect upon the property in the town of Leith, and the warehouses and the docks?—I observe upon Mr. Cubitt's plan, there are wharfs erected at different parts between Newhaven and the present docks, and as, wherever there is a wharf, there must be warehouses, I presume that that would affect the rents of the bonded yards and warehouses in Leith.

1608. Can you state how frequently it happens that heavy vessels come to the Forth, which are unable from the want of sufficient depth of water to enter the harbour?—It is very seldom that they do not come in; it is only a few vessels trading to North America.

1609. Do they form a very considerable proportion of the whole trade that frequent the port of Leith?—A very small portion. With the permission of the Committee I will read an extract from a Report of the Collector of Customs to Mr. Telford, which will give the Committee a very general idea of the shipping that enters the port of Leith: "Small vessels without pilots, 2,116; ditto under 10 feet of water, 1,426; ditto 10 feet water, 96; ditto 10½ feet water, 809; ditto 11½ to 12 feet water, 172; ditto 12½ to 13 feet water, 67; ditto 13½ to 14 feet water, 42; ditto 14½ to 15 feet water, 11; ditto 15½ feet water, 2; making vessels not exceeding 10 feet, 3,638; from 10 feet to 12, 481; from 13 to 15½, 122: Total, 4,241."

1610. Are you of opinion that if there was deeper water at Leith, the size of the vessels would increase?—No; I am of opinion that the small class of vessels would still come into the port of Leith.

1611. Will you state your reasons for that opinion?—Our Baltic trade requires no larger tonnage, and I conceive that if we have ships trading from China to Leith, they will find it more profitable to have small vessels than large, that is to say, vessels from 400 to 500 tons.

1612. What depth of water would they draw upon the average?—I suppose, loaded with tea, about 15 or 16 feet.

1613. Has there been a vessel from China come to Leith lately?—One, called the Isabella.

1614. What size was she; what water did she draw?—They told me 15½ feet.

1615. Did she meet with any accident?—She grounded in coming into the mouth of the harbour.

1616. Was it under any particular circumstances?—They attempted the harbour when they had too little water, but still I think they might have got in if they had kept the channel.

1617. If they had waited till the proper time, could they have got in?—They attempted to come in at the top of high water.

1618. If the Isabella had been properly conducted, do you conceive that there would have been any difficulty in her entering the harbour?—I am of opinion that she would have come in, although I was certainly against the owners of the vessel bringing her in.

1619. You mean that as harbour-master, you gave your opinion to the owners of the vessel against attempting to enter the port at that time?—I said that if they kept the channel she would come in, but that if they got out of it she would certainly ground.

1620. Did she get out of the channel from accident or mismanagement?—I think from mismanagement.

1621. Then is it your opinion that if the vessel had been properly conducted, she might have entered the port at the time she attempted?—That is my opinion.

1622. You stated that you thought it would be a great convenience to the steam navigation of the port, if a pier could be constructed to enable passengers to land at all times of the tide; have you ever considered where you would place such a pier?—I conceive, if Mr. Cubitt's plan could be carried into effect, that that would answer all the purposes.

1623. Have you ever seen Mr. Walker's plan?—I was sitting in the committee-room here when it was mentioned.

1624. From your general knowledge of that side of the Forth, where would you place any pier of this sort, keeping in view those works that you propose doing at the mouth of the present harbour?—I conceive if it is kept in clear ground, and contiguous to good roads to Edinburgh, that it matters very little where it is placed.

1625. Would

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1625. Would you object to Granton?—Perhaps there is not that protection at Granton that there is from the rocks here.

1626. Would Trinity or Granton be the best place in your opinion for such a pier?—I have not given it sufficient attention to be able to answer that.

1627. Can the steam boats and smacks always leave the harbour at high water upon the days appointed for their sailing?—I have only known one instance of the steam boat being kept in the harbour for one tide.

1628. What was the reason of that?—They had loaded her too deep; she could not get out.

1629. Are you aware that the shipping in the roads are often obliged to lighten before they can attempt to make the harbour?—It is principally the North American vessels, of which there are not above four or five (making two voyages each) in the course of the year.

1630. Are you not aware that sometimes the Leith and London steam vessels do take out part of their cargo before they enter the harbour?—I am aware of that at neap tides.

1631. Was the Isabella lightened before she attempted to enter the harbour?—I think there was one lighter load taken out; but it is very difficult to know how much they lighten in the Roads in consequence of the swell of the sea.

1632. Were you consulted by the pilots before the Isabella attempted the harbour?—It is not in my recollection.

1633. Have you any control over the pilots?—None whatever.

1634. It was not in your power to give any specific directions as to the mode of that vessel entering the harbour?—No, having no authority over the pilots, I do not like to interfere with them in their duties.

1635. You make a signal at the end of the pier to intimate what depth of water there is?—Yes.

1636. Do the large steam vessels make use of Leith Harbour or the docks?—Those belonging to the London and Glasgow Shipping Company come into the harbour.

1637. Can they make use of the docks?—They cannot go into the docks with their paddles on, because the entrance is too narrow.

1638. Where do they go?—They lie alongside of the piers.

1639. Is a steam vessel more likely to suffer injury from taking the ground than a sailing vessel?—No, I have never found it.

1640. Do you know that the steam vessels that do take the ground in the harbour have never suffered any damage?—I am perfectly certain that they have not, and my reason is that the whole weight of a steam vessel is in the middle of her; the ends of her are not so loaded. I have seen the Leith vessels loaded with whiskey and ale, and I have never understood that one of them hurt themselves.

1641. Are the steam vessels which enter the harbour differently constructed from those belonging to the other company that do not enter the harbour, in order that they may take the ground without injury?—I can speak with safety to all but the Monarch, and I can say that they are all constructed upon the same principle; there may be some little difference in the formation of the body.

1642. Are the engines placed in a different manner so as to secure them from risk?—Not to my knowledge. Every engineer has his own mode of fastening the engines on board a vessel.

1643. In point of fact, is there less water outside than there is in the channel of the harbour?—We have about two feet six inches to two feet nine inches more upon the outside than upon the dock sill; all vessels coming out of the dock can go clearly out of the harbour.

1644. What time is allowed before and after high water for vessels to enter or leave the dock?—They are at liberty to leave when they think proper themselves; men are at the dock-gates ready to lock them out; all that we look after is, that the vessels shall not ground upon the dock sill, in locking them out.

1645. When it blows a gale of wind from the eastward, is it dangerous or inconvenient for persons to walk along the pier to the very end of it?—It is not dangerous, it is inconvenient.

1646. Would it be inconvenient to land goods in a gale of wind?—They are not allowed to land goods either in fine or in bad weather there.

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1647. Could the eastern pier be ever made available for the purposes of the steam navigation?—It could, by constructing a railway upon it.

1648. When the execution of the pier was undertaken, was it understood to be beneficial to the King's ships that might resort to the Frith of Forth?—It was considered that the western breakwater could be made available for King's boats to come in and take their stores from that part of the dock which was made over to the Government.

1649. Are you of opinion that that would be useful in case of necessity?—Yes.

1650. Have you seen the plan for the proposed harbour at Trinity?—There is a small sketch now before me, but I have not seen the sections.

1651. Do you consider that it would be safe or easy in blowing weather, with a heavy sea, to enter a harbour the mouth of which had that breakwater immediately in front of it?—I consider there would be great difficulties in entering that harbour, for reasons which I have stated in a former part of my evidence; I have explained that the flood makes up two hours before low water, and it again commences running down two hours before high water; consequently when large ships are going into Trinity Harbour, they would have the whole strength of the ebb tide to contend with across the harbour's mouth.

1652. Would that observation apply to vessels entering from the western side as well as from the eastern?—They would have the tide with them there; but on the opposite hand, if it was blowing hard from the north-east, and a strong sea set in in the face of the wind, there would be a great turmoil of sea.

1653. Do you think it would be safe for a vessel to go to leeward of the breakwater with the wind at north-east?—I can only say for myself that I would not do it, because if I missed the quay-head, there is no alternative but to let go the anchors; and I do not see room between this and Wardie Bush to bring a ship up and ride safe at anchor.

1654. You are now speaking of sailing vessels, do you think it would be practicable for a steam vessel?—A steam vessel can come in, but after she has entered, she is solely dependent upon her holdfasts or ropes.

1655. Do you think that breakwater would afford a sufficient protection from the sea, so that a vessel might lie in safety there?—I have not seen the sections of the breakwater.

1656. The breakwater is proposed to be constructed 13 feet above high water?—Whatever height it is, the sea coming from the north-east must enter the mouth of the harbour.

1657. In short, you think there would be a great surge of the sea inside the breakwater in a north-east gale of wind?—Yes.

1658. Do you think the surge would be so great as to be dangerous to a vessel, and to prevent her making fast in shore so as to bring up in safety?—If she let go her anchor in the mouth of the harbour, the anchor would not hold till she is on the outside of the quay edge.

1659. Then the only means of a vessel holding fast is by hawsers to the breakwater?—Yes; and also to the check piers.

1660. Then are you of opinion that, if it was blowing hard from the north-east, the surge of the sea would be so great as to make it inconvenient if not dangerous for a vessel to attempt to make fast inside the breakwater?—That is my opinion: the check piers, I understand, are also upon arches, and the rise of the sea inside must, of course, come up to the level of the outside.

1661. Are you of opinion, as an experienced sea-officer, that a work might be constructed to give shelter to ships that would obviate those difficulties?—In Mr. Cubitt's plan you could run in safely.

1662. The question refers to a floating-dock, with a breakwater to give an entrance?—I am not sufficiently an engineer to construct one, though, as a sailor, I might give my opinion after it was constructed.

1663. Did you ever see any harbour or docks constructed upon a principle similar to the one you have before you?—No.

1664. Do you conceive that if works of that description were constructed either at Trinity, or upon any other point of the southern coast of the Frith of Forth, there would be any difficulty in a vessel in rough weather availing itself of such works?—I am afraid so; because there are so many courses to be adopted before you can get into safety in the Trinity Harbour.

1665. If a vessel was lying in the roads in a gale of wind, and she was driven from

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from her anchors, would you in that case run up the Forth, or would you try to make for a harbour such as that?—I should run up above the high land, what they call the Lower Hope.

1666. Do you think that the trade of Leith could support two rival harbours so near each other as Leith and Trinity?—No, I do not; to illustrate that I may say, that when I left Leith there were only two vessels outward bound and one homeward bound in the west dock.

1667. If a floating-dock was contructed as it is laid down upon the plan before you, and a breakwater to protect the entrance, do you think that the dock-gate could be opened when a swell was setting in from the eastward, so as to allow vessels to pass and repass with convenience and safety?—In such a sea I conceive no outer dock-gate could be opened, or in other words, that no lockage could take place.

1668. Are you aware of the size of the arches of these check-piers in the plan before you?—No, I am not aware what size they are.

1669. Suppose the arches to be four feet wide, and the pillars between them about four feet?—Whatever size they are, they must throw the sea up in proportion to what it is thrown up upon the outside; of course, the smaller they are the less it will be.

1670. Would you be afraid of the harbour at Trinity silting up?—No, I should not be afraid of its silting up from the eastward, if the works which I have before described were carried out in the extension of the east pier, and the connexion with the Martello Tower.

1671. But supposing that extension of Leith Pier was not to take place, and suppose Trinity Harbour to be executed in the manner delineated upon the plan before you, do you think that the flood tide would bring in the sand so as to make a deposit at the back of that breakwater, or in any position that would prevent the egress and regress of vessels?—If I take the instance of Newhaven Pier, I do not see any silting up there, and consequently I conceive there would be none here.

1672. Do you think there would be any deposit come with the ebb tide from the westward?—No, I am of opinion that there is no silt comes from the westward.

1673. Do you know whether the water has deepened or shallowed upon the west side of Newhaven Pier since it was constructed?—It has not shallowed; but I am not prepared to say whether it has deepened.

1674. Have you ever seen any of the moss that comes from Blair Drummond, which is so prevalent even so far as Largo Bay, upon the opposite side of the Forth?—I have never seen it but when crossing over in steam boats; I have never seen it come into the mouth of the harbour of Leith.

1675. Have you seen none of it upon the shore to the south?—None.

1676. In your opinion, would a low-water pier at Granton be as convenient for the steam boats coming from Pettycur, Kirkaldy, Dysart and Largo, as a low-water pier at Newhaven?—I believe that Newhaven is the nearest point; Granton is nearer to Burnt Island than Newhaven, but it is further from Pettycur.

1677. Then, upon the whole, which of the two places would you prefer?—I should certainly prefer Trinity to Granton as a tide pier; when I speak of Granton, I speak with great diffidence, because I have never surveyed it, and, according to Mr. Stevenson's plan, there are a great many rocks there.

1678. Do you think that the extension of the Drum Sand, which lies to the westward of it, might prove injurious to any works constructed at Granton?—It is my opinion it would not.

1679. Have you seen a plan of a harbour and docks proposed by Mr. Anderson?—I have.

1680. What is your opinion of that harbour, as a shelter for vessels coming in?—That it would shelter vessels coming into it.

1681. Are you of opinion that there would be sufficient water for vessels drawing 10 feet to come into that harbour at low water spring tides?—I have never heard any explanation whether it is to be dredged out or not; if it is to be dredged out, of course there would.

1682. As to the facilities of entering, would it be subject to the objections you have stated of vessels going behind the breakwater at Trinity, or could a vessel in a north-east gale of wind enter with safety a harbour constructed in

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that manner?—A vessel coming in under Mr. Anderson's pier is sheltered the moment she gets in from a north-east gale; she has not to perform any evolutions there of turning round at right angles as at Trinity, but she goes straight in.

1683. Then you see no difficulty in her entering?—No.

1684. Suppose she was coming in with a fresh breeze from the north-west, do you see any difficulty in her entering?—There may be more difficulty in that point; they must be cautious to shorten sail in time.

1685. Is there a considerable swell of the sea with the north-west wind?—Yes.

1686. If they shortened sail in time, could she easily gain the protection of the western breakwater which is delineated in Mr. Anderson's plan?—She gains the protection, but the way upon her might produce considerable mischief if they do not check her.

1687. Would it be more difficult to enter that harbour than the present entrance of Leith Harbour?—Yes.

1688. What would be the additional difficulty or danger that the vessel would be exposed to?—When you enter Leith Pier, coming between the pier heads, you are then in safety, and you can shorten sail; if a vessel has too much way, the sand port is always kept open, and she can run into that if her ropes fail in bringing her up.

1689. Then you think there is not sufficient space in the outer harbour, in Mr. Anderson's plan, to enable a vessel to bring up?—She has to come against high stone walls.

1690. Would there be any difficulty in the vessel reducing her sails so much before she enters as to remove that danger?—I am speaking of its blowing hard, and then a ship keeps her way without her sails.

1691. You do not think there would be room for her to bring up under the western breakwater?—She might come under the western breakwater, but she would be entirely dependent upon her ropes, and I have a great fear of trusting a vessel to her ropes.

1692. You observe an archway marked upon the western breakwater; are you of opinion, from the observations you have made upon the set of the tides, and the deposit made by the tides, that the harbour would be likely to silt up by means of what was brought in by that archway?—I do not conceive that much silt comes from the westward; it is only in such a small portion that it would be easily dredged out there.

1693. Then you would have no apprehension of that harbour being filled up by any thing brought down by the ebb tide?—None.

1694. Has there been any accumulation of sand in the harbour of Leith at the inside of the western breakwater?—That is a deposit, not of sand, but of black muddy stuff that comes down from the river.

1695. Do you dredge away any part of that, or do you confine your operations of dredging to the channel?—We merely dredge the channel.

Captain *Francis Beaufort*, R. N., called in; and Examined.

Capt. *F. Beaufort*, R. N.

1696. YOU are the hydrographer to the Admiralty?—Yes.

1697. Will you furnish the Committee with any chart of the soundings of the Frith of Forth, which may be in the possession of the Admiralty?—This is a chart that has been sent up to me yesterday by Mr. Thomas, who is surveying the coast of Scotland, and was sent by me into the Frith of Forth, to give such a statement of the soundings as would enable the Committee to judge exactly where the deepest water lay, with respect to the shore, between Granton and Leith; and I have brought the original as it came.

1698. Have you had an opportunity of comparing the chart of Mr. Thomas with the chart of Mr. Dall?—Not yet.

1699. Will you have the goodness to compare Mr. Dall's survey with that of Captain Thomas, and then to furnish the Committee with such hydrogaphical observations as may occur to you upon a comparison of the two charts, particularly with reference to the shifting of the sands at the mouth of the harbour of Leith?—By inserting Mr. Thomas's soundings in Mr. Dall's chart, the Committee will immediately see what changes have taken place. I presume that the Committee do not wish me to give any opinion of my own upon it. I have no local knowledge of the place.

Mr. *William*

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Mr. *William Marshall*, called in; and further Examined.

Mr. *W. Marshall.*

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1700. CAN you furnish the Committee with Statements of the revenues of the port of Leith for the last ten years?—Yes.

[*The Witness delivered in the same, as follows:*]

ACCOUNT of Dues levied on Shipping and Goods at *Leith* for 10 Years, from 1825 to 1834.

YEARS.	ON VESSELS.			ON GOODS IMPORTED.			Shore Dues on Goods exported.	Total Amount of Revenue.
	Dock Dues.	Beaconage and Anchorage.	Berthage, and Flag or Light Dues.	Shore Dues.	Merk per Ton.	Pontage.		
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1825	6,092 6 3	1,813 8 3	1,036 3 8	5,145 – 2	5,169 16 2½	962 18 –½	965 16 6	21,185 9 1
1826	7,292 2 10	1,662 13 3	954 1 2	4,196 19 4	4,231 14 10	1,232 9 7	962 13 4	20,532 14 4
1827	5,600 19 7	1,828 19 6	1,031 4 9	4,053 8 6½	4,099 17 5½	917 3 2½	930 – 5	18,461 13 5½
1828*	5,153 13 2½	1,618 10 9	918 7 4	3,690 12 5	3,660 17 7	906 19 8	971 4 2	16,920 5 1½
1829	5,685 11 1½	1,653 6 9	963 4 10½	3,965 18 4	3,876 12 1½	1,009 19 6½	1,048 3 9	18,202 15 11
1830	7,072 6 11	1,543 18 5	889 19 7	3,574 7 2	3,616 2 7	1,242 9 8	1,018 15 4	18,957 19 8
1831	7,208 15 7	1,616 12 2	924 9 11½	3,763 2 1	3,797 3 6	1,285 2 11½	1,096 6 9	19,691 13 –
1832	6,662 1 6	1,545 6 3	854 8 2½	3,405 7 2½	3,414 18 6½	1,252 10 11	1,204 17 8	18,339 10 3½
1833	6,691 8 6	1,520 17 3	892 3 10	3,268 14 1	3,180 11 3	1,182 17 8	1,365 4 7	18,101 17 2
1834	7,009 10 1	1,705 17 6	911 2 –	3,631 – 7½	3,694 14 1½	1,244 4 9½	1,353 14 1	19,550 3 2½

* The Dock Dues were raised one-third, and the Pontage one-half in December 1828.

ACCOUNT of Feus and Rents and other Revenues at the Wet Docks, *Leith*, for 10 Years, from 1825 to 1834.

YEARS.	Wet Dock and Pontage Feus and Rents.	Public Dry Dock Dues.	Cranage.	Church Seat Rents.	TOTAL.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1825 - - -	3,222 18 –½	86 18 –	249 12 3	5 10 –	3,564 18 3½
1826 - - -	3,061 6 6½	178 4 3	317 16 1	5 6 –	3,562 12 10½
1827 - - -	2,946 18 10	63 16 6	123 – –	5 6 3	3,139 1 7
1828 - - -	2,586 10 2½	67 19 9	126 5 4	4 17 –	2,785 12 3½
1829 - - -	2,656 8 1½	59 1 –	79 18 –	12 4 –	2,807 11 1½
1830 - - -	2,589 6 8½	29 18 6	87 16 2	13 6 6	2,720 7 10½
1831 - - -	2,983 8 3½	59 9 –	88 12 8	12 12 –	3,144 1 11½
1832 - - -	2,987 3 7½	53 12 –	100 4 1	10 11 –	3,151 10 8½
1833 - - -	2,927 15 2½	84 – 6	89 8 3	8 18 –	3,110 1 11½
1834 - - -	2,926 7 5½	76 7 6	82 11 9	9 11 –	3,094 17 8½

1701. It appears that the gross receipts in the port of Leith have not varied considerably since the year 1825; has there been any great alteration with respect to the amount of those dues themselves?—In 1828 the dock dues were raised one-third, and the pontage one-half. The pontage is a rate of three-halfpence per ton; it was formerly a penny.

1702. Has there been any alteration in the impost of the merk per ton during the same period?—It has been lowered upon tallow, hemp, flax, grain, timber, iron, sugar, and several other articles of import.

1703. When was that done?—About six or eight months ago.

1704. There appears to be a very large increase in the shore dues upon goods exported since 1825; is that increase to be attributed to the duty having been raised, or to the increase of the quantity of merchandize exported?—It is owing to the increase of merchandize exported; no additional rate of duty having been levied upon the goods outwards.

1705. Have you any account which will show the amount of tonnage of the vessels entering the harbour of Leith, or clearing out from the port for the same period for which you have given the revenue?—I have an account of the shipping entering the port since 1760.

Mr. *W. Marshall.*

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1706. Have the goodness to deliver it in.

[*The Witness delivered in the same, which is as follows:*]

AMOUNT of SHIPPING entering *Leith* since 1760.

Years.	Tons.	Years.	Tons.
1760	34,000	1818	341,000
1770	66,000	1821	312,000
1781	63,000	1824	342,000
1788	117,000	1827	365,000
1801	186,000	1830	308,000
1810	266,000	1832	309,000
1815	257,000	1834	340,000

1707. The proceeds of the merk per ton go to the payment of the clergy of Edinburgh?—They do.

1708. All the rest of the dues at Leith are liable to the payment of the debt due to the Government?—They are, with the exception of the Prime Gilt.

1709. Do the clergy of Edinburgh receive the proceeds of the merk per ton, whatever those proceeds are, or do they receive any fixed sum of money?—They receive only the proceeds of the merk per ton, whatever those proceeds amount to.

1710. Is any deduction made from that sum on account of the charge of levying the impost, or for any other service?—A proportion is deducted as the expense of collection.

1711. In the account of the amount of shipping entering Leith Harbour, do you include the steam vessels?—I do.

1712. Do you include the steam vessels that anchor in the roads, as well as those actually coming into the harbour?—Yes; steam vessels from Aberdeen, London and Newcastle are all included in that account; but none of the vessels plying in the Frith of Forth.

1713. You have put in an account of the amount of shipping for various years since 1760; what was the order of selection you used in selecting those years?—I intended to have taken them every 10 years, but there were two or three books missing, and I took the next in order.

1714. Does this account relate to vessels entering the harbour only, or both entering and departing?—All vessels coming to any port within the precincts of the harbour.

1715. But not vessels leaving the harbour?—No.

1716. Are you well acquainted with the port charges levied at the other ports in Scotland?—I have some knowledge of the charges levied at Dundee and Aberdeen.

1717. Have you the charges at Greenock and the other ports in the Clyde?—I have not; my inquiry did not extend to Greenock, from the circumstance that much of the foreign trade of Glasgow passes through Greenock, and becomes subject to dues at both ports.

1718. Are the duties levied at Dundee higher or lower than at Leith?—They are four per cent. lower than at Leith.

1719. Can you give the Committee a comparative statement of the charges upon a vessel of two or three hundred tons, with a mixed cargo, at Dundee, Aberdeen and Leith?—I can.

COMPARATIVE STATEMENT of DUES chargeable at the Ports of *Aberdeen*, *Dundee* and *Leith*, on a Vessel of 200 Register Tons, with a Cargo of 300 Tons Fir Timber from *America*.

	ABERDEEN.			DUNDEE.		LEITH.		
	Vessel belonging to Aberdeen, and Cargo to Freemen.	Vessel not belonging to Aberdeen, and Cargo to Unfreemen.	Foreign Vessel, and Cargo to Unfreemen.	Freemen.	Unfreemen.	British Vessel and Cargo to Freemen.	British Vessel and Cargo to Unfreemen.	Foreign Vessel and Cargo to Unfreemen.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
On Vessel - -	– 16 8	1 2 3	11 13 4	4 3 –	5 15 –	14 14 2	14 14 2	21 7 6
Cargo - -	21 – –	28 – –	28 – –	7 4 –	7 4 –	12 7 6	16 4 7	16 4 7
£.	21 16 8	29 2 3	39 13 4	11 7 –	12 19 –	27 1 8	30 18 9	37 12 1

COMPARATIVE

COMPARATIVE STATEMENT of DUES chargeable at the Ports of *Aberdeen*, *Dundee* and *Leith*, on a Vessel of the same burthen, with 200 Tons Wine from *Oporto* or *Cadiz*.

	ABERDEEN.			DUNDEE.		LEITH.		
	Vessel belonging to Aberdeen, and Cargo to Freemen.	Vessel not belonging to Aberdeen, and Cargo to Unfreemen.	Foreign Vessel and Cargo to Unfreemen.	Freemen.	Unfreemen.	British Vessel and Cargo to Freemen.	British Vessel and Cargo to Unfreemen.	Foreign Vessel and Cargo to Unfreemen.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
On Vessel	– 16 8	1 2 3	11 13 4	2 16 4	4 8 4	12 9 9	12 9 9	18 – 10
Cargo	20 – –	26 13 4	26 13 4	32 – –	32 – –	14 18 7	17 10 –	17 10 –
£.	20 16 8	27 15 7	38 6 8	34 16 4	36 8 4	27 8 4	29 19 9	35 10 10

COMPARATIVE STATEMENT of DUES chargeable at the Ports of *Aberdeen*, *Dundee* and *Leith*, on a Vessel of the same burthen, with 150 Tons Tallow and 100 Tons Hemp from *St. Petersburgh*.

On Vessel	– 16 8	1 2 3	11 13 4	2 16 4	4 8 4	12 9 9	12 9 9	18 – 10
Cargo	30 – –	40 – –	40 – –	15 – –	15 – –	12 9 1	15 17 7	15 17 7
£.	30 16 8	41 2 3	51 13 4	17 16 4	19 8 4	24 18 10	28 7 4	33 18 5

COMPARATIVE STATEMENT of DUES chargeable at the Ports of *Aberdeen*, *Dundee* and *Leith*, on a Vessel of 150 Tons, from *London*, with 100 Hogsheads Porter, 20 Butts Yeast, 150 Chests Tea, 20 Sacks Seed, 10 Tons Saltpetre, 10 Tons Sugar, 400 Hides and 100 Barrel Bulk Haberdashery, &c.

On Vessel	– 12 6	– 16 8	– –	1 7 –	2 3 –	– 6 2 6		
Cargo	9 14 2	12 18 11	– –	9 3 9	9 3 9	– 9 10 2		
£.	10 6 8	13 15 7	– –	10 10 9	11 6 9	– 15 12 8		

Note.—An additional rate is levied on shipping at Dundee under the name of Tay Light and Buoy Dues, which is precisely similar in its nature to the Prime Gilt levied at Leith. It is not included in the above, from the circumstance of not having their exact amount when this statement was ordered to be prepared.

COMPARATIVE STATEMENT of DOCK and HARBOUR DUES leviable on Vessels at the Ports of *Liverpool*, *Leith*, *Dundee* and *Aberdeen*.

ARRIVING FROM	LIVERPOOL.	LEITH.						DUNDEE.		ABERDEEN.		
		British Vessels.			Foreign Vessels.			Free.	Unfree.	Belonging to Aberdeen.	Not belonging to Aberdeen.	Foreign Vessels.
	Dock Duties.	Dock Duties.	Beaconage and Anchorage.	Total.	Dock Duties.	Beaconage and Anchorage.	Total.	Tonnage Duty.		Harbour Dues.		
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Davis Straits	2/	2/	/1½	2/1½	3/	/1½	3/1½	/6$\frac{2}{5}$	/8$\frac{8}{25}$			
India or China	3/	1/8	/1½	1/9½	2/6	/1½	2/7½	2/	2/1$\frac{13}{25}$			
West Indies	2/	1/8	/1½	1/9½	2/6	/1½	2/7½	/6$\frac{2}{25}$	/8$\frac{8}{25}$			
British America, United States & Mediterranean	2/	1/4	/1½	1/5½	2/	/1½	2/1½	/4$\frac{4}{5}$	/6$\frac{18}{25}$			
Baltic, above the Sound	1/4	1/1$\frac{1}{3}$	/1½	1/2$\frac{5}{6}$	1/8	/1½	1/9½	/3$\frac{1}{5}$	/5$\frac{3}{25}$			
Portugal, France & Spain, without the Straits	1/	1/1$\frac{1}{3}$	/1½	1/2$\frac{5}{6}$	1/8	/1½	1/9½	/3$\frac{1}{5}$	/5$\frac{3}{25}$	/1	/1$\frac{1}{3}$	1/2
Hamburgh, Rotterdam & Bremen	1/	/10$\frac{8}{12}$	/1½	1/0$\frac{1}{6}$	1/4	/1½	1/5½	/3$\frac{1}{5}$	/5$\frac{3}{25}$			
Ports south of Flamborough Head, or from Orkney and Shetland	–	/8	/1½	/9½	1/	/1½	1/1½	/2	/3$\frac{7}{25}$			
Ditto, between Buchaness and Flamborough Head	–	/4	/1½	/5½	/6	/1½	/7½	/1$\frac{3}{5}$	/2$\frac{22}{25}$			

Noté.—At Leith, a small additional charge, from 3*d.* to 7*s.* 6*d.* per vessel, is made for berthage, and flag or light dues; and at Dundee, a similar rate is levied for plankage.

At Leith, dock duties are only chargeable on 8 voyages in the year, although 240 voyages, in some cases, are performed. On a steamer of 300 tons in the London trade, making 25 voyages annually, the average amount of dues per voyage is 101*s.* 6*d.* or 4½*d.* per ton. By this regulation, which is peculiar to the port of Leith, the dock duties are made to press severely on shipping engaged in the foreign trade.

COMPARATIVE STATEMENT of the RATES levied at the Ports of *Aberdeen*, *Dundee* and *Leith* on those Commodities which constitute the principal Part of the Import Trade of *Leith*.

	ABERDEEN Shore Dues.		DUNDEE Shore Dues.	LEITH Shore Dues, &c. to Freemen.				LEITH Shore Dues, &c. to Unfreemen.			
	Free.	Unfree.		Shore Dues.	Merk per Ton.	Prime Gilt and Pontage.	Total.	Shore Dues.	Merk per Ton.	Prime Gilt and Pontage.	Total.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Haberdashery Goods, Groceries - per 8 barrel bulk	2/	2/8	3/2 2/3	/3 1/3	/13 1/3	/2 1/2	/19 1/6	/6 2/3	/13 1/3	/2 1/2	1/10 1/2
Wheat - per 100 qrs.	27/9	37/	13/4	5/6 8/12	10/5	4/2	20/1 3/3	11/1 1/3	10/5	4/2	25/8 1/3
Barley and Oats - ditto	17/4	23/1	10/	3/9 2/3	7/1 5/6	2/10 1/6	13/9 1/2	7/7 1/3	7/1 5/6	2/10 1/6	17/7
Sugar - per ton	2/	2/8	1/2 2/3	/3 1/3	/10	/2 1/2	1/3 5/6	/6 2/3	/10	/2 1/2	1/7 1/6
Hemp and Flax - per 30 cwt.	4/6	6/	1/9 3/5	/5 1/3	/10	/3 3/4	1/7 1/12	/10 2/3	/10	/3 3/4	2/ 5/12
Tallow - ditto	3/	4/	1/9 1/5	/5 1/3	/10	/3 3/4	1/7 1/12	/10 2/3	/10	/3 9/12	2/ 5/12
Fir Timber - per 50 cubic ft.	1/9	2/4	/7 1/5	/4 1/6	/5 5/6	/3 1/12	1/1 1/12	/8 1/3	/5 5/6	/3 1/12	1/5 1/4
Cheese - per ton	2/6	3/4	1/7 1/5	/3 1/3	/13 1/3	/2 1/2	1/7 1/6	/6 2/3	/13 1/3	/2 1/2	1/10 1/2
Porter - per 8 barrel bulk	2/	2/8	/1 1/5	/3 1/3	/13 1/3	/2 1/2	1/7 1/6	/6 2/3	/13 1/3	/2 1/2	1/10 1/2
Wine and Foreign Spirits - ditto	2/	2/8	3/2 2/3	/3 1/3	/13 1/3	/2 1/2	1/7 1/6	/6 2/3	/13 1/3	/2 1/2	1/10 1/2
Hides - per 100 pieces	4/2	5/6 2/3	1/7 1/5	/10	/10	/5	2/1	1/8	/10	/5	2/11

Note.—On the large quantities of Grain, Whiskey, Ale, and other goods, the produce of Scotland, *no Merk per ton being chargeable*, the rates are much lower than at Aberdeen or Dundee.

COMPARATIVE STATEMENT of the RATES levied at *Aberdeen*, *Dundee* and *Leith* on those Commodities which constitute the principal Part of the Export Trade of *Leith*.

	ABERDEEN.		DUNDEE.	LEITH.	
	Freemen.	Unfreemen.		Freemen.	Unfreemen.
	s. d.	s. d.	s. d.	s. d.	s. d.
Linens, Cottons, Books, &c. - per 8 barrel bulk	2/	2/8	3/2 2/3	/3 1/3	/6 2/3
Whiskey - ditto	2/	2/8	2/1 1/3	/3 1/3	/6 2/3
Ale - ditto	2/	2/8	1/3	/3 1/3	/6 2/3
Yarn - per 20 cwt.	3/	4/	1/7 1/3	/8	1/4
Wool - ditto	6/10 2/3	9/2 1/3	2/8	/11 1/3	1/10 2/3
Gunpowder - per 8 barrel bulk, per 20 cwt. at Dundee	2/	2/8	4/	/3 1/3	/6 2/3
Rags - per 20 cwt.	2/6	3/4	/4 1/3	/3 1/3	/6 2/3
Soap - ditto	2/6	3/4	1/2 2/3	/3 1/3	/6 2/3
Cast Metal - per 30 cwt.	2/	2/8	/10 2/3	/5 1/3	/10 1/3
Pig Iron - ditto	2/3	3/	/4 2/3	/5 1/3	/10 2/3
Bottles - per 5 gross	2/6	3/4	/8	/3 1/3	/6 2/3
Lead - per 20 cwt.	2/	2/8	/7 1/3	/2 1/2	/2 1/2

1720. How are the charges at the port of Aberdeen, as compared with those at Leith?—The charges at Aberdeen are 20 per cent. higher than at Leith.

1721. Have you prepared any statement of the comparative charges upon the shipping of the port of Leith, supposing they were charged the Aberdeen and Dundee dues?—I have; the charges, if estimated at the Aberdeen rates, would produce an aggregate revenue of 22,700*l.*, and, calculating them at the rates levied at Dundee previous to 1831, when the reduction took place, the revenue would be 22,757*l.* 2*s.* 7*d.*; at the rates presently levied at Dundee, the revenue would be 18,205*l.* 14*s.* 1*d.*

1722. And what is the revenue by the Leith rates?—Eighteen thousand pounds; there is an additional rate levied at Leith in behalf of the Trinity House at Leith, called the Prime Gilt; it amounts to 840*l.* The whole revenues of Leith, including the merk per ton and prime gilt, amounted in 1832 to 18,818*l.*

1723. That sum forms no part of the revenue of the corporation of Edinburgh, and therefore it is excluded in the account you have given in of the revenues of the port?—It is not included in the 18,000*l.*

1724. Are there any other additional duties to which the ports of Aberdeen and Dundee are not subject?—I am not aware of any.

1725. The results you have stated to the Committee mix up the dock dues and the shore dues upon goods at Aberdeen and Dundee; have you any means of

of showing what are the different rates payable upon goods at those three several ports, distinct from the shore dues?— Mr. *W. Marshall.*

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STATEMENT of the various DUTIES levied on GOODS and SHIPPING at the Ports of *Leith* in 1832, with the several Amounts which these Duties would have produced, had they been levied agreeably to the *Aberdeen* Rates, or to those now and formerly exacted at *Dundee.*

	Gross Amount of Leith Revenue in 1832.	At Aberdeen Rates.	At Dundee Rates of 1831.	At Dundee Reduced Rates.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
On Shipping - -	8,969 5 6½	1,700 – –	6,815 17 5	5,452 13 11
On Goods Imported -	8,636 16 7	15,300 – –	10,658 13 3	8,526 18 7
On Goods Exported -	1,204 17 8	5,700 – –	5,282 11 11	4,226 1 7
£.	18,810 19 9½	22,700 – –	22,757 2 7	18,205 14 1

Note.—The amount of the Leith Revenues in 1832, as here stated, differs from that exhibited in a previous statement. This arises from their being made up at different periods.

1726. Are you aware whether any vessels have gone to Grangemouth, and landed their cargoes there, which have been afterwards brought back to Edinburgh, for the purpose of evading the payment of the duties of the port of Leith?—I have heard of fish-boats doing it; but it was rather with a view to get clear of the dues called teinds, levied on behalf of the clergy at Leith.

1727. Is that charge for the tithe of fish payable to the clergy of Edinburgh, or to the clergy of Leith?—To the clergyman of North Leith.

1728. Is that a charge peculiar to the port of Leith?—I believe it is peculiar to Leith.

1729. Have you ever known any timber ships go up to Grangemouth, and land a portion of their cargo, which has come back to Edinburgh?—I have heard of cases where the principal part of the cargo was for Glasgow, and a small part for Edinburgh. The part for Edinburgh would of course be sent by the canal, as the certain risk attending the floating of timber by the Frith would be avoided.

1730. Is there much trade from Leith to the West Indies?—It has increased of late years. The following is a statement of the tonnage since 1818:—

Years.	*Tons.*	*Years.*	*Tons.*
1818	679	1827	261
1819	307	1828	963
1820	540	1829	1,580
1821	1,233	1830	1,166
1822	817	1831	1,621
1823	307	1832	1,850
1824	612	1833	1,448
1825	1,036	1834	1,768
1826	389		

1731. Therefore there has been a considerable increase of the West India trade?—There has.

1732. If the rates at Leith were so exorbitant as to make it an object to merchants importing to land their cargoes at another place, would it not follow that persons trading from the West Indies would land their cargoes in the Clyde, and bring them by the canal to Edinburgh for the supply of that part of the country?—A very large proportion of the West India supplies required for Edinburgh and Leith are obtained from Greenock and Glasgow by the canal.

1733. But notwithstanding the facilities given by the Union Canal, the West India trade at Leith is still increasing?—It has increased considerably.

1734. What persons chiefly carry on the Leith West India trade?—It is principally carried on by Glasgow merchants, but managed by a gentleman who resides in Edinburgh.

 1735. Has

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1735. Has there been any alteration in the port of Leith, so far as the coal trade is concerned?—There has been a considerable falling off in the quantity imported, for the use of the inhabitants of Edinburgh and Leith, from the ports in the Frith of Forth. Previously to the opening of the Union Canal in 1821, the quantity of coal imported into Leith was 56,842 tons, and in 1834 it had fallen off to 33,315 tons. This would have given employment to about 20,000 tonnage of shipping.

1736. Does it include both Scotch and English coal?—The decrease has taken place, I believe, entirely in the Scotch coal from the opening of the Union Canal and Railway; and another decrease has taken place in the Glasgow and Greenock trade, in consequence of the opening of the Union Canal. The extent of the decrease from the last-mentioned circumstance amounts to several thousand tons.

Lieut. *George Crichton,* called in; and further Examined.

Lieut. *G. Crichton.*

1737. HAVE you heard the evidence of Mr. Dall?—I have.

1738. Do you generally coincide with the opinion expressed by him as to the practicability of improving the entrance into Leith Harbour, and of keeping that entrance open by the construction of works to the eastward?—Yes.

1739. Do you consider that if an increased depth of water, to the extent of three feet, could be procured and maintained, that that would afford sufficient accommodation for the trade of Leith?—I think it is all that is required for the general trade of the port of Leith, exclusive of steam-boat accommodation.

1740. You are connected with a company who have several large steam-boats employed in the London and Leith trade?—Yes, we have three of the largest.

1741. Do you consider that it would be a great convenience to that trade to have a low-water pier, at which those large vessels might come alongside?—We require a low-water pier to land the passengers, and we require an entrance into the wet dock to enable us to go into the dock, for which we pay dock dues, and which would certainly be more convenient than lying in a dry harbour.

1742. Where do you conceive that a low-water pier for the steam trade could be most conveniently erected?—If the pier is to be upon the plan of Mr. Walker, which was laid before the Committee the other day, and which appears very well adapted for steam accommodation, Granton would be the best position, because it is in a bay, and the breakwater coming across it, there are fewer points of the wind in which a vessel would be exposed; a vessel would always have a lee side to lie upon, while upon a straighter line of coast she would not have that advantage.

1743. If such a pier were constructed upon the plan proposed by Mr. Walker, would it be practicable for steam vessels to lie alongside of it during the whole time they are in the Frith of Forth, or would you propose to bring your steam vessels into the wet dock at Leith, provided the entrance was wide enough?—We would land our passengers at the low-water pier, and any light goods that required great despatch, and go into the dock to discharge the remainder of our cargoes.

1744. Would you consider it any disadvantage or inconvenience that Granton pier should be at such a distance from the eastern entrance to Leith Harbour, if you contemplated moving your vessel into the harbour after you had landed the passengers?—Not to a steam vessel; the difference of time consumed would be a mere trifle, while the great object at Granton is that deep water is procured at a shorter distance from the main land than it can be near Newhaven.

1745. Would it not be inconvenient to the steam boats from the coast of Fife, especially from the eastern ferries, to be obliged to go so far to the westward?—The distance from Pettycur would be a little more than to Newhaven, but Granton is nearer to Burnt Island than Newhaven is.

1746. With regard to the boats coming from places still further to the eastward, such as Dysart and Kirkaldy?—The trifle of a distance would be no object to a steam boat compared with getting deep water at a shorter distance from the shore.

1747. Notwithstanding the general prevalence of westerly winds in the Frith of Forth?—Yes; now that the passage is wholly carried on by steam vessels, the difference of distance would be of no great importance.

1748. Is it your opinion that the erection of a low-water pier, for the accommodation

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modation of the steam navigation, and an increase of the depth of water, as suggested by Mr. Dall, in the eastern entrance, would be all that would be required to remove the present defects of the port of Leith?—The plan that I before considered preferable for all interests, if it could be executed, was Mr. Cubitt's; but there appear to be considerable doubts as to the expense of the work; but, next to that, certainly this plan would afford the best accommodation, at the least possible expense to the public.

1749. Do you think that the proposed harbour at Trinity would afford the required accommodation to the public?—I do not think the harbour at Trinity is calculated for the purpose, from the nature of its entrance; and it would be highly injurious both to the parties engaged in it, as well as to the port of Leith, from the magnitude of the undertaking.

1750. Do you consider that the trade of Leith is sufficient to support two rival establishments?—It might support a low-water pier independent of Leith, but it never could support two sets of wet docks, or works of the description intended at Trinity.

1751. You stated before that it would be impossible to find any persons who would engage, as a profitable speculation, to take shares of the present docks at Leith?—It would depend upon the valuation that was put upon the property, and the sum it was purchased at.

1752. Suppose it was purchased at the amount of the debt to the Government?—No person would now engage in that speculation where they saw the absolute necessity of a rival landing place. It is certain now that the proprietors of steam-vessels will not submit to be without proper accommodation somewhere, and that would make the speculation of the docks and harbour at Leith more hazardous.

1753. Do you think that any capitalists at Leith would be inclined, as a profitable investment, to engage in a speculation at Trinity, or any other rival harbour?—Not a harbour, but they might for a low-water pier, such as that recommended to the Duke of Buccleuch by Mr. Walker.

1754. When you talk of a low-water pier, do you intend any dues to be levied there for the behoof of the port of Leith?—Most certainly not at Granton.

1755. Would not that prove injurious to the present revenues of the harbour of Leith?—It would no doubt be in a small degree injurious, but not so injurious as going to a very large outlay to retain that trade, where there are great natural difficulties to be overcome; the interest of the sum expended might amount to more than the decrease in the revenue from the loss of the steam trade.

1756. As you propose that your steam-vessels, after having landed the passengers at Granton, should resort to Leith Docks, would not they become liable both to the low-water pier dues at Granton, and also to the harbour dues at Leith?—Yes; but at present they are exposed to the expense of landing the passengers in small boats.

1757. You have stated that there is deeper water at Granton than at the other places; how are you aware of that fact?—From the survey in the Duke of Buccleuch's plan. I have sounded a good deal off Trinity and off Leith, but not off Granton, that being comparatively a new place.

Mr. *John Phin*, called in; and Examined.

Mr. *John Phin.*

1758. YOU are clerk to the commissioners for managing the Docks and Harbour of Leith?—Yes; I am also a soljcitor in the Supreme Courts of Scotland.

1759. Is it within your knowledge that disputes and litigation have long existed between the shipowners and merchants of Leith and the town council of Edinburgh respecting the amount of the charges in the port, and the want of requisite accommodation for the trade?—I am aware that such disputes have existed since 1826, when I became acquainted with Leith.

1760. What is the present constitution of the commission who manage the port of Leith?—It is constituted under an Act of Parliament of 7th Geo. IV. c. 105. By section 2 there are 21 commissioners, who are the lord provost of Edinburgh for the time being, five other members of the town council of Edinburgh, to be chosen annually by the lord provost, magistrates and council; the master of the Merchants' Company in Edinburgh for the time being; three members of the incorporation of the Trinity House of Leith; three members

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of the incorporation of Traffickers of Leith; two merchants of Edinburgh appointed by the town council, but not members thereof; three merchants or shipowners of Leith; all to be annually elected, and possessing the qualifications as specified in the Act; and three persons to be from time to time appointed by the Lords Commissioners of the Admiralty.

1761. What are the duties of the commissioners?—To take the general superintendence, care and management of the Harbour and Docks at Leith, and works connected therewith, and to direct all matters in regard to the maintenance, repair, cleansing and improvement of the same, as fully and to the same extent as the said lord provost, magistrates and council of the city of Edinburgh, and their predecessors and authors were empowered to do by virtue of their charters and title deeds, or by virtue of the said recited Acts, or any of them. [*See* Sections 16, 19, 21, 22, 23, *et seq.*]

1762. What funds are at the disposal of the commissioners for executing the duties which are imposed upon them by the clause you have just read?—By the 23d Section the commissioners are authorized to order the execution of all improvements, alterations, repairs or other works, which shall not exceed in any one year 1,000*l.* for the said harbour, and the like sum of 1,000*l.* for the said docks.

1763. By whom is that sum of 2,000*l.* paid to the commissioners?—It is paid out of the revenues of the port of Leith; the commissioners have an annual credit of 2,000*l.* with the city of Edinburgh collector, which the superintendent draws, independently of salaries and fixed allowances to officers and servants.

1764. Is the 2,000*l.* that you have mentioned independent of the sum contributed out of the proceeds of the harbour of Leith, towards the liquidation of the debt in extending the eastern pier?— Yes; the magistrates were bound to expend 28,000*l.* upon the improvements, instead of making the clergy advance their two-fifths, or whatever it was, according to their share of the dues, which would have been unfair to the present incumbents; it was settled by way of annuity, and by this Act 600*l.* is to be retained, provided the magistrates advanced the whole sum of 28,000*l.*, which they did, and the 600*l.* is deducted from the merk per ton belonging to the ministers of Edinburgh.

1765. Is there any fund supplied to the commissioners for the purpose of dredging and keeping the harbour clear of mud?—That is a separate account; the 2,000*l.* a year is exclusive of the expense of dredging.

1766. Can you state what has been the annual expense of dredging since you have been clerk to the commission?—Not at present; that is not in my department. I have nothing to do with the receipt or disposal of the money.

1767. By the constitution of the commission which you have read, it appears that there are commissioners representing the various interests connected with Edinburgh and the port of Leith and the Admiralty?—Yes.

1768. As the interests of those parties may frequently be at variance, it is natural that there would be a considerable diversity of opinion among the commissioners?—We have occasionally a great difference of opinion.

1769. Have the commissioners ever thought it their duty to suggest any plan for the improvement of the harbour of Leith?—The great improvement was settled by Act of Parliament before the commission was constituted; there have been minor improvements suggested by the commissioners; but as they cannot be undertaken without the sanction of the town council or corporation of Edinburgh, of course the council must be consulted.

1770. No expenditure beyond the 2,000*l.* which is authorized by the Act, can be undertaken by the commissioners without the previous sanction of the town council of Edinburgh?—That is so provided by the Act.

1771. Has the sum been found sufficient to keep the harbour in proper repair?—When the commission was first constituted, it was far from being sufficient from the then state of the harbour, and a great deal more was required; but I believe it has been sufficient of late for the ordinary repairs.

1772. Have you within a short time presented a memorial to the Treasury upon the subject of the necessity of making some improvements in the harbour?—Yes.

1773. Was there any particular scheme of improvement suggested in that memorial?—I am not aware that there was any particular plan pointed out; there are various plans, and several of them have been well thought of, and I believe the trade generally would be satisfied with Mr. Cubitt's plan, or

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Mr. Anderson's plan, or any plan that would give them the requisite accommodation.

Mr. *John Phin.*

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1774. Was it merely suggested by rumour that a rival establishment was likely to be erected to the westward?—I think the rival establishment at Trinity has been contemplated in consequence of the complaints of the trade at Leith.

1775. Have any complaints been made upon the part of the steam-boat companies to the commissioners as to the insufficiency of the harbour for the accommodation of their vessels?—Frequently.

1776. Can you furnish the Committee with a copy of the first Memorial presented in the month of June last?—Yes; in the summons which I received from this Committee, I was desired to lay before the Committee, first, a certified copy of the Report or Letter of Sir John Rennie, civil engineer, addressed to Lord Melville, dated on or about the 23d of February 1827; second, the Plan of Sir John Rennie for the Improvement of Leith Harbour; third, a Letter of Lord Melville to the Commissioners of Leith Harbour and Docks on the subject of Sir John Rennie's Plan and Report, dated on or about 7th March 1827. I have brought with me the Plan and certified copies of those Papers, which I will deliver in.—[*The Witness delivered in the same.*]

1777. Are there certified copies of the revenue of the harbour laid before the commissioners?—The commissioners are the auditors of the accounts of the dock dues and tonnage dues, but not of the shore dues, or any thing else.

1778. Do you produce an account of the revenue and expenditure of the docks of Leith, independent of the harbour and shore dues?—Yes; for the seven years preceding Whitsunday 1832.

1779. Has it been extracted from the books by yourself, and can you certify that it is correct?—Yes, and it is certified by me as correct.

1780. You are requested to furnish the Committee with certified copies of the Memorial to the Treasury of June 1834, and relative Report on Trinity Harbour; also of the Memorial to the Treasury lately presented by the Commission on the same subject?—They shall immediately be furnished from the records in my possession.

Martis, 9° die Junii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Sir *John Rennie*, called in; and Examined.

Sir *John Rennie.*

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1781. WHAT opportunities have you had of becoming acquainted with the Harbour of Leith, and the southern coast of the Firth of Forth?—I have been down there repeatedly, and I was there in the year 1825 by direction of the Admiralty, for the purpose of reporting upon the best mode of carrying into effect Mr. Chapman's plans for the improvement of the harbour.

1782. Do you continue to entertain the opinions which you expressed in the Report now before the Committee?—I do; but I wish to explain to the Committee that the plan which I gave to Lord Melville in the year 1825 was done for the purpose of preventing any misunderstanding that might have taken place as to the views that I took of Mr. Chapman's plan. The object of the Admiralty in sending me down there at that time was simply to examine into the mode of executing Mr. Chapman's plan, it having already been determined to carry that into effect As the Admiralty were partly concerned, and as they had some idea of carrying into effect the western pier, my object was to see that both the eastern pier and the western pier were correct as to their details; and having given that opinion, then for fear that any thing I might have said might have been construed into approval of the principle of the plan of Mr. Chapman, I wrote to Lord Melville the Report which accompanied my observations upon Mr. Chapman's plans.

1783. Have you seen the various plans which have been proposed for improving the Harbour of Leith, or opening an entrance to that harbour from the westward,

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westward, or constructing a new harbour?—I have seen several plans proposed by various gentlemen.

1784. Did you conceive that it would be easier to improve the present harbour, or to construct a new harbour at either of the other situations that have been pointed out for the purpose?—My opinion with regard to the improvement of the old entrance of the harbour is certainly not very favourable. The additional depth of water which may be gained by any works that may be erected will be extremely trifling, and will be maintained at a very great and continued expense. So far, therefore, it does not appear to me advisable to lay out any considerable sum upon the old entrance. The next question is, where ought a new entrance to be placed? The best plan, in my judgment, is, to extend an entrance from the docks towards the westward; and it appears to me from what I have seen of the charts and read upon the subject, that a very good entrance may be made near Newhaven, something similar to what I proposed myself in 1825.

1785. Do you conceive that that would make altogether as good and convenient a harbour as any one that could be constructed either at Granton or Trinity?—That opens into a very large question, which involves the consideration whether you would take the harbour entirely away from Leith; but I should conceive a very good harbour could be made, by improving the entrance at Newhaven, quite sufficient for every purpose that can be required for the trade of Leith.

1786. When you say an entrance at Newhaven, what particular point do you intend?—Between Newhaven and the chain pier.

1787. You have seen a plan for constructing a harbour at Trinity, supposing that plan to be carried into execution, would not a good entrance be made from thence so as to make the present docks at Leith available?—Certainly not by that plan.

1788. Do you consider the site of the proposed harbour at Trinity to be a good one for the entrance you propose?—I allude more to the plan itself and the mode in which that has been planned than the particular site.

1789. The question refers merely to the situation, do you consider that would be a good situation for constructing an entrance by a canal or otherwise to the docks at Leith?—I do not consider that it would be a bad entrance; but in the way that it is proposed, it would be quite out of the question altogether, either as to the expense or the execution of the plan.

1790. Will you state what are your objections to the harbour at Trinity?—My objections are, first of all, that it would be extremely difficult to enter, either at one side or the other, during a gale of wind. Secondly, that when a vessel had entered the outer harbour under these circumstances, she would be in very great danger of receiving damage, for the space is so small, and there would be such an agitation produced by the rush of water through the entrances and the openings formed by the arches in the check piers, that it would be extremely dangerous for vessels. Thirdly, I consider that it would be extremely difficult, and almost impracticable, to dock a vessel under those circumstances. Fourthly, there appears to me to be no provision made for supplying the dock with water; and as the lock is so very large compared to the surface of the dock, the surface of the water in the dock would be lowered very considerably every time that a vessel was taken in, and consequently must be supplied by some artificial means; and, fifthly, I conceive the estimate to be totally inadequate to the purpose; I conceive it would be nearer double that sum.

1791. Then your objections to the harbour are more objections to the plan proposed than to the locality?—Clearly so.

1792. You consider that the narrowness of the two entrances would make it difficult for vessels to get in?—Yes, and the small space enclosed by the check piers.

1793. Suppose the check piers were made elliptical?—It would require a different form altogether to make them safe.

1794. You state that you consider the expense under-estimated?—I should say it would require more than double the sum estimated.

1795. Do you say that, upon the calculation of what you know to be the expense of similar works upon that spot?—Yes.

1796. Of course you have seen a section of the work, and the mode in which it is intended to be carried into execution?—My opinion is given upon the supposition that it would be so made as to stand. First of all, I consider that the

plan

plan is wrong in principle; and, secondly, that even to carry it into effect, it would cost double what it is estimated at. Sir *John Rennie.*

1797. You have stated a plan that you think might make the harbour sufficient, what would the plan that you yourself propose cost?—I have already given an estimate of it; I think it was 224,000*l.* which I consider to be a full estimate. 9 June 1835.

1798. Do you consider that 224,000*l.* laid out in that way, would give such a harbour as to be capable of containing vessels of all sizes, the large steam-boats and the large merchantmen?—No, not if it be required to give more than ten feet at low water of the very lowest ebbs, so as to enable the largest class of vessels alluded to, drawing 14 or 15 feet, to enter under all circumstances at all times of the tide; neither in like manner would the estimate complete the Trinity plan, which I do not approve; indeed, to render that plan efficient to accommodate the largest vessels, under the same circumstances, would cost a great deal more than 400,000*l.*

Mr. *John Gibb*, called in; and further Examined.

1799. YOU assisted Mr. Telford in his survey in 1828?—I did.

1800. Are you aware of the reasons which induced Mr. Telford to recommend to the Government an extension of Newhaven Pier out to where there is foul ground?—The chief object was the saving that would be got, there being already about 500 feet seaward of the present pier available. Mr. *John Gibb.*

1801. In what form was the proposed pier of Mr. Telford?—It was carried out from the present pier head, by raising up a platform sufficiently wide for a double carriage-way and a footway, and then there were a certain number of openings or archways, 120 feet wide, placed upon stone pillars, and those stone pillars were to be founded caissons or carcasses, till it came within 2 or 300 feet of the extremity when the work was to be entirely of stone, and a T break-water at the outer end for the protection of vessels lying at each side, having an opening at the end of the pier to allow the ebbing and flowing of the tide to pass through.

1802. Suppose it had been erected, would that have been sufficient for the accommodation of the steam-vessels and the larger vessels that now trade to that port?—Mr. Telford had no other intention but merely accommodating the ferry steam-boats, and it had no reference to the larger steam-boats; he proposed one pier there and another pier at Burnt Island, and then a new line of road from that to Kinghorn.

1803. Suppose a low water pier of that description was constructed, how would you connect it with Leith?—By a railway; that would be a very simple operation.

1804. As a ferry station, do you consider that Trinity is better or not so well adapted, provided low water piers were constructed at Granton?—I would consider Trinity the best situation for the purposes of the ferry; and if you make a low water pier, the best situation for all classes of steam-boats.

1805. You have heard doubts as to the possibility of constructing the works you have proposed at Trinity for the sum estimated, do you still adhere to your opinion with regard to the possibility of doing it?—It does not alter my view of the question in the slightest degree, because I apprehend most of the witnesses that have spoken upon that question are in a great measure unacquainted with the localities. In the first place, there is such a superabundance of stone upon the Inch Darnie, lands close above Burnt Island, and again in Lord Morton's lands; perhaps there is no situation in the kingdom where stone can be so easily procured. Then it would be a very simple matter, now that we have the advantage of steam-boats there, to provide the materials and put them on board large lighters; and from the circumstance of our being enabled to make those external walls subservient as coffer-dams after going round the external pier, we would be able to perform the whole dry, with the exception of a coffer-dam across the entrance of the lock.

1806. You have stated that you would yourself contract for executing the work for the sum you stated, 180,000*l.*?—I repeat it now, and I have no hesitation about it.

1807. Have you any comparative view of the prices in your own estimate for Trinity and in that of Mr. Anderson?—I compared Mr. Anderson's prices and applied them to the quantity of work in ours in the estimate for Trinity Harbour, and I placed Mr. Anderson's prices, as far as they were applicable to our quantities, and I find that, taking the same prices that he gives and our quantities, so far as they are applicable, the whole would not exceed 130,000*l.*

Mr. *John Gibb.*

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1808. With regard to the foundations, do not you build a great deal of the supposed cheapness with which this is to be done, upon the facility with which you would be able to found?—Yes.

1809. You consider that the foundations would be so easily made in that particular spot, that that would very much reduce the expense?—Very much; and the mode of proceeding, upon which I have no hesitation in saying I have experience; I am not speaking upon theory, but upon that I have carried into execution in more difficult situations.

1810. Consequently your opinion is formed upon what you know by practice to be practicable?—I have actually done: the inside of the Peterhead Wharf is built in from 11 to 14 feet water; the stones put down on edge, and the wharf stands well at this moment, and there is not a more exposed situation in the kingdom.

Mr. *James Stuart*, called in; and Examined.

Mr. *James Stuart.*

1811. HAVE you had any opportunity of being acquainted with the communication by ferry between the northern and the southern shore of the Firth of Forth?—I was an acting trustee both upon the Queen's Ferry and the ferry from Leith to Kincardine for 30 years, from the year 1798 to the year 1828, and I believe attended their meetings as regularly as any other trustee, and I was convener of the committee of management of the Queen's Ferry from the period when the Act was obtained in 1809 till 1828.

1812. Is it your opinion that there is not sufficient accommodation on the southern shore of the Firth of Forth for the ferry intercourse that exists?—I always thought that it was quite disgraceful to Scotland and to the country in general that the communication was so very defective, considering the great importance of it, both locally and in a national point of view.

1813. Will you state in what these defects consist?—Owing to the want of low-water piers upon both sides of the Forth; that want was remedied at the Queen's Ferry, in consequence of an Act which was obtained in 1809, principally through the Lord Commissioner Adam.

1814. There is no low-water pier nearer Edinburgh than Queen's Ferry?—None.

1815. Can you state what would be the most convenient point for the erection of such low-water piers?—The most convenient situation I believe to be where the stone pier at Newhaven was erected according to Mr. Rennie's plan, about the year 1820, and Burnt Island upon the north shore. The old harbour of Leith is totally unfit. I know Mr. Rennie's plan intimately, because I was with him when he made out the plan for the pier at Newhaven; it was never understood to be a low-water pier except for small boats.

1816. Is the ferry communication between the two shores very considerable?—Very considerable; I do not know what it has been during the last six years, but I know that previous to that the communication was about 120,000 passengers in the year, and that the revenue derived was about 12,000 *l.* a year.

1817. Is it conducted by steam-boats?—It is.

1818. Are those steam-boats in the hands of a company?—In the hands of the ferry trustees appointed by Act of Parliament.

1819. Was that stone pier at Newhaven erected at the expense of the trustees?—Partly at the expense of the trustees, and partly at the expense of Government.

1820. When you first knew the ferry, was not Leith the point?—Previous to the stone pier being erected in 1819 or 1820, I think the communication was almost entirely from Leith Harbour.

1821. Would a low-water stone pier on each side of the Firth of Forth be all the accommodation which would be required for the passage of the ferry between the two coasts?—All the accommodation required for the ferry is a pier carried out according to Mr. Telford's plan in the year 1828, and upon the other side, according to his plan, at Burnt Island; that would afford all the accommodation necessary for the ferry.

1822. You would not consider that any additional protection in the nature of a harbour would be necessary, as far as the ferry is concerned?—Upon a matter of that sort my own opinion is of very little value; but I know that was the opinion of Mr. Rennie and Mr. Telford.

1823. Do you consider that the stone pier at Newhaven has answered the purpose

pose for which it was intended?—It has answered the purpose for which it was intended, for small boats getting to it at all times of the tide, but not for steam vessels. Mr. *James Stuart.* 9 June 1835.

1824. Can the ferry-boats land passengers at all times?—Not steam-boats; the funds were insufficient for that purpose.

1825. What do you consider would be the best point of communication with Burnt Island?—I do not know that there is any better situation than the present pier at Newhaven.

1826. Do you consider the situation of the chain-pier as equally good?—Very nearly so; the difference of distance is very trifling; but I should conceive, as the stone-pier is built at Newhaven, there is an obvious advantage in adopting that situation, from the work already done upon the stone-pier at Newhaven.

1827. Is it your opinion that both the city of Edinburgh, and the whole of the country, suffer materially, in consequence of not having a better harbour than the Harbour of Leith?—Undoubtedly; I consider the situation of Leith Harbour, both as a harbour and as a ferry station, disgraceful to the country; I do not know an improvement that is so much wanted. With respect to all improvements in the Highlands, that ferry ought to be the great inlet to them. The distance to Dundee is 23 miles nearer by this ferry than by Queen's Ferry, and Perth is nearer by seven miles.

1828. What is the size of the steam vessels by which the ferry communication is conducted?—I think about 120 tons.

1829. You consider that if a good harbour were constructed, the commerce of that part of the country would be very much increased?—I have always thought that a low-water harbour was necessary in the neighbourhood of the metropolis of Scotland, and certainly the nearer to Leith the better, because the interests of private property would be much less deranged by having it at the west end of the docks; but if it cannot be placed there, the nearer it is to Leith the better.

1830. You consider that any new harbour, constructed so as to admit of the possibility of communication with the present docks of Leith, would be very advantageous to the public?—Very advantageous; I do not know an improvement in Scotland so much wanted.

1831. Is it your opinion that it would be impracticable to make the present entrance to the Harbour of Leith effectual?—I never supposed it possible; but the Committee have the opinion of engineers upon it, which are much more valuable than mine.

William Cubitt, Esq., called in; and further Examined.

1832. YOU have heard the statements that have been made by the various civil engineers who have been examined before the Committee upon the subject of your plan?—I have. *William Cubitt*, Esq.

1833. Are there any observations which you wish to make to the Committee with reference to those remarks?—There are a few observations that I wish to make upon the subject. It appears that some misapprehensions have arisen in the minds of the engineers with reference to the peculiar construction of the breakwater, with which I propose to enclose the space for the harbour, as to the possibility of the construction, and the permanency of it when so constructed. I should be anxious to tender to the Committee evidence in support of that particular construction, by persons who have constructed such works exactly in a similar manner, and in similar situations, which are all standing remarkably well at the present time, merely to show that it is not merely speculative, but a plan which has been proved, and with which I have had something to do. In Dublin Bay, where such a work is erected, there is an embankment across a considerable portion of Dublin Bay, and in parts subject to very heavy seas. It is constructed of sand and clay as an embankment first, and then covered on its sea face with stone cutting, only two feet in thickness; that has stood the last seasons remarkably well, and some very late heavy storms. The engineer of that work, whom I have not spoken to upon the subject, is at present in town, Mr. Vignoles, and he could speak respecting the thing to the Committee; and Mr. Pynn, the treasurer of the railway, is also in town, and could give evidence upon the subject. I mention that, to show that the plan, in my judgment, would answer the purpose, and not exceed the expense I put upon it. I would also mention, that in the peculiar situation I have chosen, a harbour double the extent

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may be included at the same sum of money, if necessary, which is worthy of some consideration. If my eastern breakwater were extended from its present termination at the entrance to the end of Mr. Chapman's western pier, it would enclose a harbour double the size at the same expense, which is worthy of consideration, because it would afford room for slips for beaching and hauling vessels up, and every other purpose connected with the repairing or refitting of mercantile vessels. I have also here a plan at low-water mark of Leith Harbour, as it existed about 160 years ago, a copy of which was appended to my Report which went to the Admiralty. I have only one more remark to offer with reference to the estimate for dredging, which was said to be insufficient; the estimate is nearly 50 per cent. more than I have had a great quantity of work done in deep water, and besides putting on a heavy price upon the dredging, I have allowed 16,000*l.* for the absolute purchase of steam vessels, and the freight of barges for doing the dredging work, besides allowing 10 per cent. for contingencies upon a very high price.

1834. Do you expect that it would be done for less than the estimate?—I could get the dredging done for a good deal less.

1835. Do you apprehend that there is any difficulty in dredging according to the mode you propose, where there is very hard clay with large stones in it?—Not any; we have dredged among very large stones and very large timber, and we have never found any difficulty, because, instead of dredging right on end, the dredging-vessels swing from side to side, or along the bottom; I have not seen it anywhere except in two harbours.

1836. Would the ordinary mode of dredging succeed where there is hard clay and large stones in it?—No; it is quite different; it is to get over those difficulties that the plan has been used, and it suits all soils.

1837. How many years' experience have you had of that mode of dredging?—Above twenty.

1838. And you have found it effectual?—Always, and cheaper than dredging by hand.

1839. Cheaper than by hand upon dry land?—Exactly so.

Captain *George Thomas*, R.N. called in; and Examined.

Capt. *G. Thomas*, R.N.

1840. YOU have been employed for some time in the hydrographical department of the Admiralty?—Ever since the year 1810.

1841. And you lately commanded one of His Majesty's surveying-vessels?—I have, for 25 years.

1842. Are you intimately acquainted with the Firth of Forth?—I am.

1843. Have you made surveys of the soundings in the Firth of Forth?—Yes, I was three years employed in it, and I have been there ten summers since.

1844. What was the date of the first?—One thousand eight hundred and fifteen. I have been there every summer for the last ten years; for three years I was sent down by Government to survey the spot.

1845. Do you consider yourself perfectly acquainted with the soundings of the Firth of Forth?—Yes, from Grangemouth to the Isle of May.

1846. You have just returned from there?—I have.

1847. In the course of the observations you have made upon the soundings and the currents of the Firth of Forth, and having reference to the charts that are now in existence, do you consider that there has been much difference during the time that you have been acquainted with the Forth as to the depth of water?—That the sand has accumulated is beyond doubt. In the year 1815 I could get my gig up as far as the light-house south of the Martello Tower at low-water spring tides, and at present there is nine inches out of water at spring tides.

1848. Will you state what observations you have made with regard to the currents in the Firth of Forth?—As they come round the Martello Tower they set west-by-north, inclining towards Granton, and they make a circle across the line between the island of Cramond and Mickray; finding a resistance from Hound Point, they are carried over to Inverkeithing Bay, where there is an immense sand-bank accumulating, and from thence they set through the ferries, where they run with great rapidity.

1849. Taking into consideration the soundings and the currents, which do you consider as the best situation for a harbour in this part of the Forth?—I already expressed my sentiments upon that subject previous to leaving town, and I have

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not altered my sentiments since that; the best place for constructing a harbour would be westward of Newhaven, directly off Trinity, and where I could bring a line-of-battle ship within a mile of the coast in 23 feet water, and I could anchor 40 sail in the spot; to the westward of this, the channel is contracted towards Cramond, till it ends in a bank on which there is from eight to ten feet water.

1850. You have answered the question with reference alone to the real situation of the coast, and the real soundings, and the currents?—Yes.

1851. The great town of Edinburgh and the port of Leith being situated where they are, do you consider that the situation you have pointed out would be a good situation for a harbour for all the purposes of commerce and navigation?—It must benefit both Leith and Edinburgh, for the whole road is nearly upon a level to the Custom-house, and a railroad could be easily constructed; and as the distance is not more than a mile and a half, it could not take more than five or six minutes to convey goods to the bonded warehouses, and it would be much quicker than a vessel lying in Leith Roads, and discharging her cargo; every thing would be in the warehouses six or seven days sooner than at present.

1852. What has been your observation with regard to Newhaven Harbour in the last survey; has it silted up or not?—When Newhaven Pier was built, the sand did not accumulate to the distance it does now, but meeting with resistance, and the water of Leith carrying the mud and sediment down, it has accumulated and been driven down by the flood-tide towards Newhaven; and if Newhaven Pier is extended further, it will be something like the pier at Dublin, the mud will flow out, and in the course of a few years a little boat will not be able to get into the harbour at Leith.

1853. From the observations you have made upon your last survey, do you consider that the sand has so shifted, or is likely to shift, as either to improve or to deteriorate the harbour at Leith?—It is impossible to improve it, for after snow or rain, the alluvial soil must come down; there is no such thing as a tide running into Leith Harbour, for the fresh water is always running out.

1854. What is your observation upon the great bank of sand to the eastward of Leith?—It has accumulated.

1855. Does that accumulation appear to be stationary, or is it moveable?—It is all moveable when the tide flows, and so is every sand; part of it is held in suspension.

1856. Has any alteration taken place since your former survey upon this bank of sand, which lies between the entrance to the water of Leith and the stone pier at Newhaven?—Yes, it has accumulated; I cannot get my boat in now at low-water spring-tides, and I remember the time when I could do it.

1857. Has the Tower Bank increased or decreased in magnitude since your former survey?—It has increased and will increase, in spite of every thing that can be done; unless they can stop the course of nature, it will be impossible to stop that from accumulating.

1858. How do you account for the formation of that bank; is it from sand coming from the eastward or the westward?—From the eastward, the ebb-tides are so weak, that they will not carry much water down so far as Leith; it is from the eastward, together with the alluvial soil coming from Leith waters.

1859. Do you consider that the present port and harbour of Leith is capable of being improved at any reasonable expense?—I cannot conceive that it can be improved, unless it is carried out as far as Inchkeith; because, if we look at Dublin Pier, they have carried it out near two miles, but the sands follow it; and so it will be if this is brought out to eternity. We have only to look at Bristol and at the mouth of the Thames, and the coast of Holland, and we see an immense accumulation of sand-banks for 20 miles distant, and it will always be the case.

1860. Have you seen the plan proposed by Mr. Cubitt?—I have.

1861. Have you seen Mr. Anderson's plan?—I have.

1862. Do you consider that either of those plans is adapted to the purpose of making Leith a good and sufficient harbour?—They might make places for steam-boats, but they never can benefit the trade of Leith; a large ship would not be able to get in; and they are so constructed, that they are made something like the Dutch dykes to catch mud, and unless they keep dredging, they would never be kept clear, and the first north-east wind would drive all the contents back again. The tides are always so exceedingly weak, that a vessel can get up the Firth of

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Forth, on the south side, with the wind dead against it, so that the sand would be more carried in suspension by the wind than by the tides.

1863. Do you consider that if dredging was carried on continuously, and to a great extent, it would be kept clear?—It would be kept clear till a good gale of wind came on from the north-east; it would be like digging a well and leaving the mud round the sides to fill up again as soon as you left it.

1864. What is your opinion of the stability of the breakwaters proposed by Mr. Cubitt?—I do not think they would stand a north-east gale, but what has been done at Leith has favoured it very much, the projection of those piers, and gives shelter.

1865. From what you have seen of the Firth of Forth, is it your opinion that works of very great strength would be absolutely necessary in that position. to give any chance of their continuing to be permanently useful?—It must be masonry, for I have seen gales of wind that would move stones of two tons weight.

1866. Does not that observation apply to any exposed situation?—Certainly.

1867. Could a vessel enter the proposed harbour of Mr. Cubitt in an easterly gale?—His harbour lies open to the northward, and they could enter with an easterly gale, provided they could carry sail; if they could not, of course they would fall upon the eastern pier, and very likely fall at the back of it, as was the case with a fine Chinaman.

1868. Were you there at the time?—I was there, and looked on, and she had a great quantity of her teas damaged, and she was warped in the day afterwards; had the wind shifted, she would have gone to atoms.

1869. Do you say that any of the teas were damaged on board the Isabella?—I do not say that I went on board and saw the teas damaged; but I heard that they were damaged, and I believe it.

1870. Do you know Mr. George Crichton's plan of extending the pier of Leith to the Martello Tower?—No, I have not seen that.

1871. Do you consider that the harbour of Leith has derived any permanent benefit from the money expended upon it with reference to the accommodation of the navy?—I cannot tell; I do not think any vessel but my own has been in for several years except King's cutters.

1872. What water do they draw?—From 12 to 13 feet.

1873. What does your vessel draw?—Nine feet.

1874. You have seen the proposed plan for the harbour of Granton; do you consider that there would be any difficulty in large vessels making that harbour?—No person would run up there in a gale of wind from the eastward, they would still anchor off Newhaven, as it is the widest space between four fathoms and four fathoms.

1875. If a large ship were in the Frith of Forth when it came on to blow hard, would not she be more likely to keep the Forth than to run into any harbour that might be constructed?—I consider that a large ship would not take the harbour during the night, nor would she run up to the North Ferry; she would anchor in Largo Bay.

1876. Supposing it was blowing a gale of wind from the north-east?—Then I would bring the ship to anchor in Largo Bay.

1877. Supposing you were driven from your anchors, would you run for Trinity harbour if it was made, or would you run up the Forth?—I would run up the Forth in a gale of wind.

1878. Do you consider that there would be any danger of the proposed harbour of Trinity silting up?—Not upon the plan I have seen.

1879. Do you consider Granton to be an equally good situation for a harbour?—Not for large ships, but equally good for steam-boats; in a north wind a ship could not get out without a steam-boat.

1880. Do you consider that there would be disadvantages in Granton as compared with Trinity?—I should prefer Trinity to Granton for this reason, because if I was running down to Trinity Harbour, and found I could not get in, I should have sufficient wind upon the starboard tack to enable me to escape danger; but if I was at Granton, I should lose my ship if I could not carry sail.

1881. You consider that in the event of missing the one harbour, there would be a possibility of escape, but that a vessel missing the other must be inevitably lost?—Yes.

1882. What is the relative depth of water at the two places?—There is nearly the

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the same depth of water at the same distance, all the way from Granton to the Martello Tower, if you take it at 11 feet water; but if you extend it out to the anchorage of four fathoms, it is nearer at Trinity.

1883. Which is the best mooring ground?—Off Newhaven and Trinity.

1884. Is the holding ground off Granton equally good?—No, there is more sand off Granton, and in walking on the beach off Granton you are up to your knees in sand.

1885. What do you consider with regard to the shelter afforded to those different harbours either by Inchkeith or any other circumstance?—It is utterly impossible for any harbour upon the south side of the Firth of Forth to be sheltered by Inchkeith; it is not elevated sufficiently.

1886. Consequently, you think in point of shelter they would be about equal?—Yes, about equal.

1887. In all cases of ordinary weather, with the two proposed entrances at Trinity, do not you consider that under most circumstances vessels could enter that harbour with perfect safety?—With any wind you could get into a harbour that had two entrances, either a wind to the northward or eastward or westward.

1888. Have you corrected the soundings upon a chart of the Firth of Forth, which has been submitted to you from your recent observation?—Yes, I have.

1889. Does there appear to be any great difference?—Upon my soundings there is two feet deeper water in most places.

1890. Is the water off Trinity deeper or shallower?—It is deeper, and likewise off Newhaven and off Leith.

1891. Supposing the harbour you have seen a plan of was constructed at Trinity, do you consider that would be sufficient for ships of His Majesty's navy?—I consider that any line-of-battle ship might go in at high water, neap tides, and at two-thirds flood at spring tides.

1892. With reference to Trinity Harbour, if the wind was blowing from the north-east with a heavy swell of sea, do you think there would be a considerable surge of the sea inside of the breakwater?—There would be a swell no doubt, but there could be no breakers.

1893. Suppose a line-of-battle ship was to take the shelter of the breakwater, under such circumstances how would you propose that she should be brought up there, considering the space which is contained between the breakwater and the whole of the proposed floating dock?—She must be brought up to some rings in the breakwater.

1894. Do you think it would be safe to bring up a line-of-battle ship in so small a space, under the circumstances supposed, when it was blowing fresh from the north-east?—I should enter upon the eastern side.

1895. Do you consider that a ship of that size would be in safety there if circumstances prevented her from entering the floating dock?—As a matter of course it would not be prudent; if she could not enter the floating dock, a man would be a madman to attempt to run in.

1896. Suppose there was a considerable swell of sea setting in from the north-east, would it be safe to remove the caisson or to open the gates at the entrance of the dock so as to allow a ship to pass in?—If there were double gates they could first open one gate and then shut it and enter the other.

1897. Supposing there was a considerable swell, would not there be risk in entering a narrow lock like that with a ship of any size?—I think not; I have seen vessels brought out of Sheerness-yard blowing a gale of wind at spring tides, and there never was more surf along the Forth than there is at Sheerness.

1898. Since the extension of the pier at Leith, has the accumulation of sand behind it increased?—It has considerably.

1899. In what space of time?—In the last 20 years; since 1815, as the pier has been extended the sand has extended with it.

1900. Suppose Leith pier was extended to the end of the present weir, and that there was an embankment placed between it and the Martello Tower, and carried on from thence to the rocks to the north-eastward of the Martello Tower, do you consider that that would be a protection against the accumulation of sand in the mouth of the harbour?—It would be a protection against the sand from the eastward, but it could not be a protection from the water of Leith carrying down its deposits.

1901. Could not that deposit be removed by dredging?—It could, *pro tempore*, but it would be filled up again unless you stopped the Leith water.

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1902. Does the ebb tide bring in any deposit into the mouth of Leith Harbour?—None.

1903. Have you ever observed a deposit of the peat from Blair Drummond Moss?—Yes, I have.

1904. Upon the north side of the Forth?—Very little upon the north side; I have observed it in the bight of the Queen's Ferry and upon the opposite side.

1905. Is it your opinion that there is any deposit of any consequence by the ebb tide?—By the ebb tide all the deposits are deposited by the Granton point.

1906. Then the shallowness of the water about Newhaven pier has arisen from the deposit of sand brought by the flood tide?—By the flood tide and the alluvial soil and sand from the Leith water.

1907. How much do you think the depth of water has increased at the end of Newhaven pier since it was constructed?—I should think three feet.

1908. Is it an accumulation which is never removed by any action of the wind or tide?—We cannot take the tide into consideration; the tides are so weak that the whole of the sands are acted upon by the wind; the waters of Leith running out must always run one way, Leith waters must always run to the westward; now had that pier not been built the waters would have made a gully for themselves.

1909. As there is a deposit at Newhaven pier, do you see any reason why there should not be a similar deposit at Trinity Harbour?—Most undoubtedly in time, but then it would take a series of years to fill up a place of ten feet.

1910. Do you think that the channel between the breakwater and the two piers would fill up?—I consider that it would not fill up, because the water of Leith must run through it; if the entrance was obliquely to the tide, an eddy would take place, and a sediment would be produced.

1911. Do you think there would be an accumulation of sand at the back of the breakwater, or at the back of the check piers?—I consider that it would first commence in-shore, and then gradually retreat off the shore.

1912. Do you consider that there would still be a channel between the breakwater and the end of the check piers?—I do, provided it is built in the manner set down.

1913. Supposing the area of Trinity Harbour was increased, and the check piers were made elliptical, and the entrance was extended to 300 feet, would not you consider that vessels of a moderate size could run for that harbour?—Most certainly, if you extend the width; but I should conclude that a vessel would never let go her anchors between there.

1914. If you had an area of eleven acres instead of six, and the entrance was wide in proportion, of course you would consider the facilities very much increased?—Certainly.

1915. So much as to induce you to think that you might, except in very bad weather, run for that harbour?—Yes, at least I should do it myself.

Charles Vignoles, Esq. called in; and Examined.

C. Vignoles, Esq.

1916. YOU are the civil engineer to the Dublin and Kingstown Railway Company in Dublin Bay?—Yes.

1917. Have there been extensive sea-walls constructed there, and embankments formed of clay and shingle, coated with rubble stones, closely packed, and only two feet in thickness?—Yes, from two to three miles in extent; they have been constructed with a nucleus on a centre portion of sand, thrown up from the beach with clay and shingle, and then faced with large stones, from two to three feet in thickness.

1918. Have they been exposed to violent storms, and have they withstood them?—They have been exposed to very violent storms during the last two winters, and to a very heavy gale of wind, indeed the heaviest that has been known in Dublin Bay for many years, about six weeks ago, and they have stood remarkably well, with this curious observation, that where they were based upon the sand, they stood better than where they were based upon the rock; where the foundation of the embankment was based upon the rock, there were symptoms of having been disturbed, whereas upon the sand there was not the slightest appearance of a shock whatever.

1919. Are they weirs or breakwaters?—Breakwaters.

1920. Is it very much exposed?—It is very much exposed to the north-east.

1921. Is

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1921. Is it not close in shore?—It is a couple of hundred yards from the shore in one portion of the bay, and in the rest of the bay about 100 yards in front of what the original shore was.

1922. What is the depth of water?—It varies; in the deepest portion there is about 20 feet at high water.

1923. Have they sustained any damage?—None of any consequence whatever; I should say not exceeding 100*l.* in the whole time since their construction; the principal portion of the damage there arose during the progress of the work, before the facing was constructed.

1924. Is the coating of it masonry?—It is rubble work, large stones weighing about a ton each.

1925. Is it cemented, or not cemented?—Not cemented; merely packed closely together, similar to the breakwater of Kingstown Harbour itself.

Mr. *Charles Cunningham*, called in; and further Examined.

Mr. C. Cunningham.

1926. DO you conceive that the Government has any claim upon any other part of the property of the corporation of Edinburgh, except that which is connected with Leith, on account of the debt which is owing to it?—That matter is specially provided for by the Act of the 3 & 4 Will. 4, c. 122; by section 15 of that Act, it is provided how the securities are to be ranked, and it appears that the security to be given to the Commissioners of the Treasury is to be ranked first, and preferably upon the harbour and works of Leith; but at the end of section 16, you find the following words: "And the security hereby granted shall be without prejudice to the said Commissioners of His Majesty's Treasury, or such person as shall be appointed by them as aforesaid, in case of the said estates, property, dues, rates, duties and revenues not proving adequate to the repayment of the said debt, interest and penalties, in the manner directed by the said recited Acts, to rank and be ranked in the same manner as the other creditors of the said city, but no farther, for so much thereof as shall remain due and unsatisfied upon all other the estates and property of the said city, liable to be attached by the diligence of creditors; any thing herein contained to the contrary notwithstanding."

1927. Does not it appear from that, that besides the preferable security which the Government have upon the Leith property, they have a concurrent security with other creditors upon the whole of the property of the corporation of Edinburgh, supposing the property at Leith not to be sufficient?—Yes, but the Government has not any preferable security in the second place.

1928. You were requested to furnish certain documents to the Committee; are you now prepared to deliver in those documents?—I am. The first of them is an account, showing the amount of the duty of the merk per ton or pack levied at the port of Leith, from Martinmas 1819 to the 3d of October 1831; this is abstracted from a return made to an order of the House of Commons, of the 10th of July 1832. The next is a statement of the merk per ton for 20 years prior to Martinmas 1808, abstracted from a return made to an order of the House of Commons, of the 2d of August 1833. I have also a memorandum of the title of the magistrates and town council of Edinburgh to the harbours of Leith and Newhaven. Here is also the minute of the town council of Edinburgh, of the 3d of July 1816.

[*The Witness delivered in the same.*]

Mr. *Robert Christie*, Accountant in Edinburgh, called in; and Examined.

Mr. Robert Christie.

1929. WHAT situation do you hold connected with the trustees of the creditors of the corporation of the city of Edinburgh?—I am accountant to the trustees.

1930. How long have you held that situation?—From the commencement of the trust; the trust took effect in November 1833, and my appointment was in December following.

1931. Can you state what is the total amount of the claims of the creditors of the city of Edinburgh?—Not having contemplated being examined here, I have no documents from which I can speak; but generally I can say that the debt consists of these portions: In the first place, the debt due to Government which is secured over the docks and harbour of Leith; in the next place, certain annuities dependent upon the lives of different parties, which at present amount to about 2,000*l.* per annum; thirdly, the ordinary unsecured debt of the city, which amounts, to the best of my recollection, to from 340,000*l.* to 350,000*l.*; there is besides, fourthly,

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fourthly, a debt amounting to between 65,000*l.* and 66,000*l.*, which is secured over the ale and beer duty, under an Act passed in the year 1798, and which endures for 38 years from that period; these four particulars constitute the debts of the city of Edinburgh,

1932. At what period was it that the interest upon those debts ceased to be paid?—As regards the ordinary debt, the interest of it was paid to such of the creditors as called for it till the commencement of the trust, on 25th November 1833.

1933. Has any payment been made since?—Since that period, and recently, there has been one general payment or dividend, at the rate of 4 ½ per cent., made to the ordinary creditors of the city of Edinburgh, to account of principal and interest.

1934. Do you consider the security of the creditors to extend over the whole of the property of the city of Edinburgh?—Undoubtedly I do.

1935. Exclusive of the Leith docks?—My understanding in regard to Leith Docks and Leith Harbour is this, that the Government debt is preferable upon them, but that the reversion of the docks and of the shore dues of Leith most undoubtedly belongs to the creditors.

1936. Is it a fact that any surplus that there may have been upon the Leith property, after paying the interest of the debt due to Government, has been paid over to the general account of the creditors?—At the time of the commencement of the trust, the magistrates of Edinburgh had allowed the interest to Government to fall into arrear, and that arrear is not altogether discharged, and consequently as yet nothing has arisen to be paid over to the trustees for the creditors, but the trustees look forward to a very large sum being by and by paid over year by year to them.

1937. Suppose, at the period when the trust commenced in 1833, there had been no arrear of the payment to Government in respect of the Leith property, do you know whether the revenue of Leith has been such as would have enabled the corporation of Edinburgh to have paid the interest of their debt to the Government, and to have applied any surplus towards the liquidation of the claims of the general creditors?—I have no doubt of it, and that to a very large extent. My understanding upon the subject is, that there would have been a surplus in that case to the extent of nearly 7,000*l.* a year, paying only the interest of the debt to Government.

1938. And the sinking fund?—The sinking fund is one per cent. at present, which would diminish the amount by about 2,400*l.* My impression is, that besides paying the interest of the debt secured upon the docks at the rate of three per cent., there is an annual surplus of nearly 7,000*l.* a year; and deducting the sinking fund, of course there would be only 4,600*l.*

1939. That is after paying all charges?—Yes; but I beg leave to mention that I have taken this from the statement of others, and not from an inspection of the documents themselves, which I have not yet had an opportunity of making.

1940. You have stated that the trustees for the creditors conceive that their claim extends over the whole of the property of the city of Edinburgh; is not that claim disputed on the part of the corporation of the city of Edinburgh?—It is, to a certain extent.

1941. Do you know how much of the property of the city of Edinburgh is held by the corporation not to be liable for those debts?—The magistrates of Edinburgh have proceeded very cautiously in the matter; they have surrendered properties to the trustees as clearly belonging to the creditors, yielding a net annual revenue of about 3,600*l.*; and with regard to all the other properties, it is not admitted, although, with regard to a large portion of them, it is not seriously disputed, that they belong to the creditors; but there are certain portions which, as I understand, the magistrates mean out-and-out to maintain do not belong to the creditors, such as those dues which are denominated the common good of the city.

1942. Do the creditors conceive their claim to extend over the whole property of every description belonging to the corporation?—The trustees for the creditors have no doubt of it.

1943. Has this claim been brought before any tribunal?—It is in the course of being so, in the shape of declarators before the Court of Session, for the purpose of having it found and declared that all these properties are vested in the trustees under the Act of Parliament passed for behoof of the creditors of the city.

1944. Do you consider those dues attachable by diligence for the creditors, according to the technical expression of the Scotch law?—I do.

1945. Have the magistrates of the city of Edinburgh lately diminished the expenses of the management of their property and other expenses connected with their

their corporation?—They have considerably diminished the expenses in some departments. Mr. *Robert Christie.* 9 June 1835.

1946. To what amount?—I am not prepared to state the amount.

Mr. *William Marshall*, called in; and further Examined.

1947. CAN you state what proportion of the goods that pay the merk per ton at Leith are goods *in transitu*?—It is difficult to say very precisely the amount of the goods *in transitu*, that are liable to merk per ton; but I can state the proportions of the trade between London and Leith. In 1832, the goods by the smacks and steamers for Edinburgh amounted to 55,000 barrels bulk; for Leith, 45,000; for Glasgow, 21,000; and for the country, 15,000. From this statement it appears that three-fifths of the goods from London by the smacks and steamers are for Edinburgh and Leith, and only one-fourth for all other places. Mr. *W. Marshall.*

1948. Can you state what proportion of those goods is liable to the merk per ton?—They are all liable.

1949. Do you know what proportion the London trade bears to the whole trade of Leith?—The goods from London may be about a fifth part of the whole imports that are liable to merk per ton. Of the whole goods imported chargeable with merk per ton, the goods *in transitu* cannot be more than an eighth or a tenth.

1950. Suppose a steam ship of the first class makes twenty-five voyages annually between London and Leith, would such a vessel have to pay more at Leith than at London for port charges?—The port charges at London on steamers and smacks are very low; from the circumstance that the wharfs at which these vessels load and discharge being the properties of the various companies to which the vessels belong. There are levied, however, on goods loaded and unloaded at these wharfs by the various shipping companies, very high rates, under the name of wharfage. For fine goods the charge is from 4*s.* to 5*s.* per ton; on ale and porter, 4*s.* per ton; whiskey, 5*s.* per ton; on a hogshead of sugar, 1*s.* 6*d.*; wine, 4*s.* per ton. Altogether the charges levied upon the goods loaded and unloaded at the wharfs in London are more than double what they are charged at Leith.

1951. You have stated that those are the dues at the wharfs and warehouses; what is the difference between the dues exacted in London, as harbour dues, and those at Leith?—There are no harbour dues exacted in London, because there is no harbour where the steamers and smacks load and unload. I believe there is a small charge levied under the name of river dues, which is either a halfpenny or a penny per register ton. The whole burden falls upon importers and exporters of goods.

1952. Are the dues exacted at London upon a steamer that does not enter the dock higher or lower than those at Leith?—The steamers that load and unload in the Thames pay no charges as harbour dues, except the halfpenny or penny per ton which I have already stated.

1953. In London does a vessel pay dock-dues without entering the docks?—She does not.

1954. At Leith does she pay dock-dues although she does not enter the docks?—She does.

1955. Are those dock dues, exacted upon a vessel at Leith in entering the docks, higher than any dues exacted upon a vessel in the port of London?—The dock dues upon a vessel at Leith are higher than the dues paid for a vessel merely lying in the Thames.

1956. In the port of London do goods, if they do not go into a covered wharf, pay any wharfage dues?—I cannot say.

1957. You said that if a vessel comes to Leith without entering the docks, she only pays dock dues eight times a year?—She only pays for eight times, whether she enters the docks or not.

1958. What shore dues does she pay besides the dock dues?—Shore dues are charged on the goods; they are about 2*s.* 1½*d.* per ton, if imported.

1959. Does the vessel pay anchorage and flaggage and other dues?—She does.

1960. Are not all those dues much higher than those exacted in the port of London?—All the dues on the vessel are much higher at Leith than they are at London.

1961. Will you state what would be the comparative charge upon the Adelaide at Leith and at London?—The Adelaide, making twenty-five voyages annually, would pay dock dues for eight voyages; these amount to 86*l.* 8*s.* The harbour

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dues, amounting to 40 *s.* per trip, being chargeable on the exact number of voyages that are performed, amount to 50 *l.*; in all, to 136 *l.* 8 *s.* for the twenty-five voyages, being at the rate of 5 *l.* 9 *s.* 1 *d.* per voyage, or 4 $\frac{1}{24}$ *d.* per ton.

1962. Do you know the comparative charges upon a vessel in the port of London?—Of course they are much lower at London, from the circumstance that the vessel has no accommodation provided for her but by the company to which she belongs.

1963. Are you aware what will be the charge of lighterage or wharfage upon a vessel discharging her cargo in the port of London not belonging to parties who have private wharfs of their own?—I cannot say; but I have a note of the charges upon some of the articles shipped at Leith: whiskey, at Leith, is charged 3 $\frac{1}{3}$ *d.* per puncheon; at the London wharfs, where the smacks discharge, 2 *s.* 6 *d.* is levied; on ale and porter, the charge at Leith is about 7 *d.* per ton; at London it is 4 *s.*; on fine goods the charge at Leith is about 7 *d.* per ton, and at London from 4 *s.* to 5 *s.*

1964. Have you the means of stating what amount the expense upon whiskey would cost the consignee at Edinburgh, as compared with what it would cost him in London, paying all the charges?—I have no means of shewing that.

Mr. *John Phin.*

Mr. *John Phin*, again called in; and delivered in the following Extracts:—

AT a stated General Meeting of the Commissioners for the Superintendence and Management of the Harbour and Docks of Leith, held within the Exchange Buildings, Leith, on Friday the 4th day of October 1833.

Present:

The Lord Provost.	Mr. Philip.
Mr. Lamond.	Mr. Robertson.
Mr. Hay.	Mr. James Wishart.
Mr. Forrest.	Captain Stoddart.
Mr. Crichton.	Captain M'Vicar.

The Lord Provost in the Chair.

The minutes of last general meeting were read and approved of.
The minutes of the meetings of the committees held since last meeting were also read.
The following minute was read:—

At a meeting of the special committee on the original grants of the harbour, &c., held at Leith, on Friday the 4th day of October 1833.

Present:

Mr. Crichton, Com^{r}.	Mr. James Wishart.
Mr. Philip.	Captain M'Vicar.

When the Act to appoint trustees for the creditors of the city of Edinburgh was laid before the general meeting, held on the 6th ultimo, it was considered important that the earliest information should be obtained as to the nature of the original grants in virtue of which the rates and duties are levied at the port, that the interests of the commission may be duly protected against any attempts which may be made by the creditors to attach those revenues for the general debts of the city of Edinburgh; in consequence of which this committee was appointed, to make the inquiry into the nature of the original grants of harbour and shore dues, and their applicability; and the following report is accordingly submitted to the general meeting.

The trustees for the creditors of the city of Edinburgh are appointed for the purpose of realizing and distributing among the said creditors, in the most expeditious and economical manner, the whole estate and effects, heritable and moveable, real and personal, wheresoever situate, and of whatever denomination, belonging to the said city, which are legally liable for the said debts and attachable by the diligence of the said creditors.

The committee, by the clerk, applied to the city clerks for information as to the original grants of the harbour and shore dues, but no information having been obtained from that source, the committee shall now direct the attention of the commission to the information to which they have had access.

The document upon which the magistrates of Edinburgh have heretofore founded their rights in the harbour of Leith, is a royal charter, by King James the Sixth, dated 15 March 1603. It proceeds on the narrative, that by the care, industry, and indefatigable labours of its merchants in navigation and foreign commerce, the revenues of our Crown are increased, the country enriched, and the people greatly improved in courtesy and good manners; and understanding that the said town of late has erected many great and useful works, namely, the enlarging and repairing the harbour and pier of Leith; therefore, for these and other reasons, His Majesty confirmed various charters that had been granted to the city of Edinburgh, and among others the following:

A charter

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A charter granted by King Robert Bruce, of the port and mills of Leith, dated 8th May 1329.

A charter by King James the Second, of the haven silver, customs and duty of ships, vessels and merchandize coming to the road and harbour of Leith, dated the 4th November 1454.

A charter by King James the Fourth, of the port of Newhaven, dated 9th March 1510.

Two charters by King James the Third, to the provost, bailiffs, council, burgesses and community of the said town of Edinburgh and their successors, for ever, both dated at Edinburgh 16th November 1482; one of the said charters contains the office of sheriffalty within the aforesaid town of Edinburgh, with other rights and privileges; the other of the said charters contains a detail of the customs, profits, exactions, commodities and revenues of the port and road of Leith, and of the aforesaid town of Edinburgh, particularly set down in the said charter, with all the rights and privileges therein specified.

The letter of gift by James the Sixth, authorizing the city of Edinburgh to receive a certain tax therein specified, during the time therein mentioned, towards supporting, erecting and repairing the bulwark, pier and port of Leith, together with all other letters, gifts and licenses granted by us and our predecessors for receiving the said tax or any other in time by past given for that purpose, dated the 24th day of March 1596.

The charter of King James the Sixth farther makes a new grant of the port, harbour and road of Leith and Newhaven, with power to levy certain dues therein specified, to be employed in building, enlarging, strengthening and upholding the said port and pier of Leith; and the magistrates of Edinburgh were also authorized to enlarge and extend the said port, pier, shore and harbour of Leith towards the sea, with the bulwarks on both sides the river, and to build, strengthen and fortify the same in a substantial manner, both for duration and the safety of ships, crears, boats and other vessels, with their goods and merchandize arriving at the said port, both in peace and war.

The charter then of new grants to the magistrates of Edinburgh the Port of Newhaven, together with the several privileges, port money, commonly called haven and shore silver, anchorage, dock silver, golden penny, imposts, customs, taxes, exactions, rents, maills, farms, duties and casualties of the same, to be applied to them and their aforesaid port of Leith.

The whole property thereby conveyed was united, annexed and incorporated to and with the said town of Edinburgh, and sundry other powers and privileges were also granted.

Various particulars in the preceding charter having been considered derogatory to the honour and dignity of the Crown, the city of Edinburgh resigned the same, and thereupon obtained a new charter from King Charles the First, dated 23d October 1636, confirming the whole grants that have been recited, the powers excepted from it relating to criminal jurisdiction, and other matters which do not appear relevant to the present inquiry.

Such being the nature of the rights of the city of Edinburgh, and the purposes for which the dues and customs leviable at the port of Leith were granted, it is of importance to inquire how far they can be attached by the creditors of the city for payment of their debts.

The rights of a free port are now well understood. It is laid down by an institutional writer (Mr. Erskine, II. VI. 17.) that such rights are *inter regalia*, and as the *regalia* of this sort are little capable of property, and chiefly adapted to public use, the King's right in them is truly no more than a trust for the behoof of his people. Of course this is equally the case when such rights have been delegated by the Crown to any private individual or corporation. Further it has been decided by the Supreme Court, that although the grantee of a port cannot be compelled to expend on its improvement any thing beyond the free profits, after deducting all necessary expenses, yet he is bound to expend the whole amount of shore dues and others arising from it, if they be required to keep it in proper repair. This seems in strict accordance with the meaning and intent of the original grants of the port of Leith.

The committee are therefore of opinion, that although the grantee of a port may be entitled to pocket any surplus revenue which may exist after defraying the expenses of management and the execution of all necessary repairs, it does not appear that he, far less a corporation constantly changing its constituent members,—is entitled to mortgage the annual revenues for any purpose whatever, or even to anticipate them, because such an application of the revenues would not only defeat the object for which they were granted, but would moreover be quite inconsistent with the nature and object of the grant.

If these views of the committee be correct, it necessarily follows that the harbour and shore dues of Leith cannot be diverted for the purpose of paying debts contracted by the town council of Edinburgh, quite unconnected with the port of Leith, and that they never could form a fund on which the city's creditors were entitled to rely for payment.

It may no doubt be argued by the town council of Edinburgh, as the grantees of the port, that they are entitled to any surplus revenue that may arise after deducting the expenses of management, and payment of the interest and sinking fund to Government with which the port has been burdened by special Acts of Parliament, but such surplus is quite uncertain, and as it is, under present existing rights, liable to be wholly expended by the commission, with the consent of the town council, it is a right inherent in the grant of the port, and can neither be alienated nor adjudged.

Such being the nature of the original grants of the harbour and shore dues of Leith, and their applicability, the committee shall now state the Receipt and Expenditure of the Revenues for the Six Years from Whitsunday 1826 to Whitsunday 1832.

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				£.	s.	d.
The produce of the shore and harbour dues for the six years, ending Whitsunday 1832, amount to				60,017	14	7
The repairs for the same period				15,552	15	2
			£.	44,464	19	5
Deduct, $\frac{2}{3}$ths, as proportion to clergy				17,785	19	9
Surplus of harbour revenues for six years		£.		26,678	19	8
The dock dues for the same period, amount to	£. 52,243	5	7			
Deduct, repairs and expense of establishment	23,480	15	3½.			
	28,762	10	3½.			
Which, applied to the payment to Exchequer on account of the debt due to Government	63,456	18	9			
Leaves a deficiency on the dock revenue of				34,694	8	6½.
Showing a deficiency on the aggregate revenues in six years of				8,015	8	10½.
Or, an annual deficiency of			£.	1,335	18	1⅝.

Besides this deficiency, there are contingent claims of nearly £. 1,000 per annum upon the revenues for poor's rates, made by the parishes of South and North Leith, and for watching and paving by the Commissioners of Police of Leith, which, if sustained, would materially increase the annual deficiency.

If any doubt remained as to the harbour and shore dues of Leith being inapplicable to the discharge of the ordinary debts of the city of Edinburgh, it will be seen from the foregoing statement that there exists no surplus which could have been applied to any such purpose, and a reference to the statements formerly prepared by the city's accountant will show that, so far from those revenues being in a state of progressive increase, the trade of the port is in the course of falling off, there having been a decrease in the course of last year of £. 783 on the aggregate revenues.

This circumstance seems to call for the immediate attention of this commission, as there is no doubt that this result has been brought about by the multiplied exactions which have been allowed to burden the trade of the port in connexion with the late burgh system.

On vessels entering the port, there are levied by the city of Edinburgh beaconage and anchorage, berthage, flaggage, ballast dues, pilotage and dock dues, while on the cargoes there are levied shore dues, pontage, customs and merk, per ton.

The latter of these duties is avowedly levied for the use of the ministers of Edinburgh, and is in many cases exacted even when the goods are merely passing through the port *in transitu*, by which means the merchants of other places are made to contribute to the support of the ecclesiastical establishments of Edinburgh, if they permit their goods to pass through the port of Leith, while a large and influential class of the inhabitants of Edinburgh are exempted from contributing to the support of their own clergy.

The effect of this system, coupled with the late rise on the dock dues, has been that trade has been driven from Leith, while it has increased in almost every other port in Scotland.

The misapplication of some of the other branches of revenue, such as the berthage, flaggage and extra-pilotage, has been deliberately avowed and sanctioned by the town council, as will be found by their own minutes, dated 3 July 1816, a copy of which is appended hereto.

The interests of the Government, as creditors for the dock debt, and those of the communities of Edinburgh and Leith, appear to require that some vigorous steps should be taken to put a stop to a system which must ultimately prove ruinous to all concerned; and as a commission has been appointed by His Majesty for the purpose of investigating into such abuses, it seems to be the decided duty of the commissioners for the docks and harbour to address a memorial to that commission, setting forth the evils which arise from heavy burthens being levied on the trade of Leith, which are not applied to the necessary purposes of maintaining and improving the harbour and docks, and which it is now evident cannot be applied to the payment of the creditors of the city of Edinburgh.

(signed) *Geo. Crichton*, Cr.

Mr. Robertson moved that the Report be approved of, which motion was seconded by Mr. James Wishart, and agreed to; against which report, and the resolution of the commissioners thereon, the Lord Provost protested, in respect that the report embraces matters *ultra vires* of the commission, and foreign to the object for which the commission was appointed, to which protest Captain Stoddart adhered.

Mr. Crichton moved, that the preceding report of the committee, with the resolution of the commissioners thereon, be forwarded as the memorial from this commission to the Commissioners for Burgh Inquiry, which motion was seconded by Mr. Philip, and agreed to; against which resolution the Lord Provost protested, in respect that the Commissioners are not the properly authorized parties for giving information to the Burgh Commissioners, their duty being to take the general superintendence, care and management of the said harbour and docks at Leith, and works connected therewith, and to direct all matters in regard to the maintenance, repair, cleansing and improvement of the same.

Extracted from the records of the commission, and certified as correct, by

John Phin, Clerk.

REPORT

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Mr. *John Phin*

9 June 1835.

REPORT of the SPECIAL COMMITTEE of the *Leith* Dock Commissioners, on the Remit from the General Meeting, on Mr. Philip's Motion about Trinity Harbour, &c. 18th April 1834.

THE motion remitted to your committee to investigate and report on, is in the following terms: " That a committee be appointed to inquire into the effect which may be produced on the Harbour and Docks of Leith, by the projected harbours at Trinity, Wardie and Caroline Park, and to report what measures are most expedient to be adopted to protect the interests of the port of Leith, and afford all the accommodation which the trade requires.

With the view of following out the remit, your committee procured and had laid on their table,

1. Prospectus of the Trinity Harbour and Dock, for the better accommodation of steam vessels and others, engaged in the trade of the Frith of Forth. December 1833.
2. Lithographed plan relative to ditto, by James Anderson, civil engineer.
3. Re-modelled prospectus of the same harbour and docks. March 1834.
4. Plan relative to ditto.
5. A view of Trinity, lithographed; all of which were duly considered, and their respective merits discussed, in so far as their erection is likely to bear upon the interest of the port of Leith committed to the care of the commissioners.

The committee also taking into consideration that large sums have been subscribed, and an application has been made for an Act of Parliament to authorize the execution of one of those plans, beg leave to report, that from the statements contained in these documents, as well as from the facts known to your committee, the great desideratum and requisite for the trade of the city and the county is a low water pier for landing passengers, and a floating dock to receive steam ships and vessels fit for the China and East India trade.

That this accommodation must be provided either at Leith, or at some short distance from it, your committee can form no doubt; but whether most expedient at Leith or at Trinity, your committee will now proceed to inquire.

If the accommodation is provided at Trinity, according to the re-modelled prospectus and plan, and for warrant to execute which application has been made to Parliament, your Committee are of opinion that the consequence will be ruinous to the revenues of the port of Leith; at least one half of the trade will be carried off, and the competition would naturally reduce the revenue from the remaining half. The amount of the loss would not be less than 10,000*l.* per annum. Indeed, if the prospectus is to be held as correct, the whole trade and revenue of Leith would be carried to Trinity. At all events, there can be no doubt that the loss of revenue and property, which the commission are bound to protect, would be immense, and, consequently, it becomes the bounden duty of the commission not so much to oppose the erection of works at Trinity, for the accommodation of trade, as to adopt a more rational, practicable and economical plan of giving the trade that accomodation at Leith.

The fact that such a plan, combining all these advantages, can be executed at Leith, is the best argument against the Parliament or the public adopting the plan of a rival harbour.

The committee cannot conceal from the commission that the crisis is important, and that an effort is necessary, but with vigorous exertion success is certain, and the threatening ruin will issue in additional prosperity.

The committee keeping in view the Trinity plans and estimates, beg to report it as their opinion, that the trade can be accommodated at Leith at a very small comparative outlay. The pier will not require to be extended more than 1,800 feet, to complete a low water landing of six feet deep, which can never fill up, and the expense will be under 20,000*l.*

Extensive docks and harbour already accommodate all the ordinary trade, and afford room for a great increase, and instead of merely opening the entrance to the present docks, which can be done, there is a space on the north of the present docks, well calculated for the construction of docks to any extent. A plan and estimate was formerly obtained by the commission from the celebrated Mr. Chapman, for the construction of one in that situation, the expense of which was estimated about 20,000*l.*

But the pier is the first and most essential work, required both for the landing of passengers and goods at low water, and for the further deepening the channel to the harbour. If this was accomplished, the necessity of harbours or piers to the westward would be superseded, and the revenues and trade of Leith would be secured and most probably increased; but the public will never rest satisfied until such accommodation is procured either at Leith or elsewhere: therefore the committee would earnestly recommend the commission to the adoption of such measures as will, without loss of time, procure the extension of the pier about 1,800 feet into the deep water, and form a railway on the pier to the shore.

With regard to the floating dock required for large steam vessels and Indiamen, the committee would recommend the question to the serious consideration of the commission, whether it would be most expedient to open the access to the present docks in the mean time, or to build an additional dock with a deeper sill than the present. The committee are inclined to prefer an additional dock, if funds can be procured, but are of opinion that it is not so immediately essential.

With respect to the funds requisite for these improvements, the committee are of opinion that if the funds and revenue of the harbour and docks are properly administered, and applied according to the original grants and conditions, there will remain no difficulty in getting

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the funds for the extension of the pier, and in due time also for the additional dock accommodation.

It is a mistake to undertake the execution of plans much greater than is required by the trade; for the interest of the cost must ever render such plans unprofitable. Such is the case with the Trinity Harbour; and it is another mistake when the projectors of that harbour say that Leith Harbour cannot be improved; for they afterwards admit, that the port of Leith, although its wet docks are of the best construction, can never be more than a tide harbour, the situation, and other natural causes combine to preclude the possibility of its ever being made a low water harbour, otherwise than by carrying its pier a great distance seaward to the deep channel of the river, which would be attended with enormous expense, and from which there never would be any adequate return.

Now the committee are convinced that this enormous expense of extending the pier to the deep channel of the river will not exceed £. 20,000, and if thus extended, an improvement will be effected which will most effectually supersede the projected Trinity pier and rival harbour, and thus secure the port and the property of Leith from the fatal consequence of such a competition.

And the committee having heard the same, agree to recommend it to the general meeting; but from which resolution Mr. Donaldson dissented.

(signed) *Rob. Philip*, C.

Extracted from the records of the commission, certified to be correct, by

London, 9 June 1835. *John Phin*, Clerk.

To the Right Honourable the Lords Commissioners of His Majesty's Treasury.

The humble Memorial of the Commissioners for the Superintendance and Management of the Harbour and Docks of Leith;

Sheweth,

That the Docks and Harbour of Leith, and revenues arising therefrom, are assigned in security for the payment of £.265,000 of the public money, advanced thereon by authority of Parliament:

That application has been made by certain parties to Parliament for an Act to authorize the construction of a rival Harbour and Dock at Trinity, about a mile west from Leith Docks, at an estimated expense of £.250,000, on the ground of the want of proper accommodation, and the heavy duties leviable at the port; and that although leave to bring in the Bill for that purpose has been postponed, in consequence of the want of compliance with the Standing Orders, there is no doubt that such application will be renewed next Session, unless steps are immediately taken for the accommodation and relief of the trade at Leith:

That Your Memorialists therefore appointed a committee of their number to inquire into the effect which may be produced on the Harbour and Docks of Leith, by the projected harbour, and as to what measures were most expedient to be adopted to protect the interests of the port of Leith, and to afford all the accommodation which the trade requires; and there is now annexed an extract Minute of Your Memorialists, containing a copy of the Report of the said committee and their resolution thereon:

That Your Lordships will observe, that Your Memorialists have not occasion to resort to any uncertain or untried plan, but merely to recommend the completion of works which are already to a great extent executed on the plan of the late eminent engineer, Mr. William Chapman, by the extension of the eastern pier across the remaining part of the bank in front of the harbour, and by projecting therefrom a low-water pier suitable for the approach of the smaller class of steam vessels at the lowest tides, and for the larger description of such vessels at half-tide:

That while the town council became bound by an agreement with the commissioners of His Majesty's Navy, in the year 1827, to use all possible means to complete Mr. Chapman's plan, by the extension of the pier; yet by an Act of Parliament passed last session, the whole disposable property of the corporation was placed in trustees for their creditors, and it is therefore now impossible that the town council should be able to execute any improvement, however urgent and necessary:

That a crisis is now arrived in the affairs of the port, which, if not attended to, may be fatal to the interest of all concerned therein; as, unless those improvements absolutely necessary for the trade be effected at Leith, the trade will be removed to Trinity, the revenues of Leith ruined, the security held by Government rendered useless, and the creditors of the city deeply injured by the Government ranking for their claim upon the general proceeds of the city's estate:

That, on the other hand, if the revenues of Leith were made applicable to their proper purposes under the most economical management the consequence will be, that the requisite accommodation may be provided at Leith, which possesses all the capabilities of Trinity, the rival harbour will be rendered unnecessary, the trade of Leith will be protected, and the security of the £. 265,000 of public money will be effectual:

For these reasons, as well as for the sake of the heritable property, valued at nearly One million sterling, vested in the trade of Leith, the Memorialists consider it their duty to lay these circumstances before Your Lordships, and to pray Your most serious consideration thereof, so that the necessary improvements recommended in the Report may be effected on the port without loss of time, by which means alone the construction of a rival harbour will be rendered unnecessary:

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As on the issue of this matter must depend the future prosperity or the utter ruin of the property confided to the management of Your Memorialists, they have felt it to be imperative on them to record their opinion, and to express their anxiety on the subject to Your Lordships; as they consider that the destiny of the Port of Leith is now in Your Lordships' hands;

May it therefore please Your Lordships to consider the premises, and after due inquiry, to adopt such measures as will not only secure the revenue of Leith Harbour and Docks from dilapidation, but insure the execution of such improvements as are required for the Trade.

(signed) *Rob. Philip*, Comr.

Extracted from the records of the commission, and certified to be correct, by

London, 9th June 1835. *John Phin*, Clerk.

To the Right Honourable the Lords Commissioners of His Majesty's Treasury.

The humble Memorial of the Commissioners for the Superintendance and Management of the Harbour and Docks of Leith;

Sheweth,

That under authority of recent Acts of Parliament (6 Geo. IV. c. 103, and 7 Geo. IV. c. 105), His Majesty's Government advanced the sum of £.265,000 to pay off the debts affecting the Docks of Leith, and for security and repayment of this sum the whole rates and duties leviable at the port were assigned to His Majesty's Government:

That at the time that this large sum of money was advanced certain arrangements were entered into with the corporation of the city of Edinburgh, by which that body was taken bound to lay out the sum of £.28,000 on the improvement of the port, by the extension of the eastern pier; and His Majesty's Government at the same time expended about £.10,000 on the construction of the western breakwater:

That by the 7th Geo. IV. c. 105, s. 28, it is enacted, That if the sum of £.28,000 should be insufficient to complete the improvements of the harbour, such further sum as might be necessary for that purpose should be raised by the Lord Provost, magistrates and council of the city of Edinburgh, upon the credit of the rates and duties leviable at the port; and such additional sums should be constituted and accumulated as a debt against the docks, to be paid out of the rates and duties, after the debt of £.265,000 at present chargeable thereon, should be extinguished:

That in consequence of the embarrassed state of the city of Edinburgh's affairs, which have been put under a parliamentary trust for the benefit of its creditors, it is impossible to expect of that corporation either to advance or to borrow any sum of money for the purpose of completing the improvements; for no private individuals will be disposed to grant loans on revenues which have already been so heavily mortgaged:

That in these unfortunate circumstances the shipping of the port cannot obtain that accommodation which is essentially necessary for the carrying on of the trade, in consequence of which certain plans are in progress for the construction of a rival harbour and dock at Trinity, about a mile west from the Leith Docks, at an estimated expense of £.250,000; and a Bill is about to be brought into Parliament to authorize the execution of the works:

That if this rival harbour be constructed, a great proportion of the trade of the port of Leith will necessarily be carried to Trinity, and not only will the property of Leith, rated at about one million sterling, be greatly depreciated, and part of it utterly ruined, but the revenues of the port will also be diminished to such an extent as will seriously affect the security held by His Majesty's Government, and the rates and duties will become totally insufficient to pay either interest or sinking fund on the Government debt.

That Your Memorialists in the month of May last brought these circumstances under the notice of the Lords Commissioners of His Majesty's Treasury, in consequence of which Your Lordships' predecessors ordered a Survey and Report by an eminent engineer, which was accordingly made; but owing to the change in the Administration, no resolution has been adopted thereon:

That as it is of the greatest importance not only to the trade and shipping of the port of Leith, but also to His Majesty's Government, that immediate steps should be taken to prevent the construction of any rival harbour, by affording the necessary accommodation at Leith, Your Memorialists have considered it their duty to bring the subject under the notice of Your Lordships; and they therefore respectfully pray,

That it may please your Lordships to take the premises into Your early consideration, and after due inquiry to adopt such measures as will not only secure the revenues of the harbour and docks from dilapidation, but will ensure the execution of such improvements as are required for the trade and shipping of the Port of Leith.

And Your Memorialists will ever pray, &c.

(signed) *George Aitchison*, Cr.
John Phin, Clk.

Extracted from the Records of the Commission, and certified to be correct, by

London, 9th June 1835. *John Phin*, Clk.

Mercurii, 17° die Junii, 1835.

THE RIGHT HONOURABLE HENRY LABOUCHERE,

IN THE CHAIR.

Colonel *George Wright*, called in; and Examined.

Colonel *G. Wright.*

17 June 1835.

1965. YOU are commanding officer of engineers in Scotland?—Yes.

1966. Have you been long acquainted with Leith?—I have been stationed in Scotland about two years and a half, and have been acquainted with Leith since the year 1797.

1967. Do you consider that your knowledge of the harbour of Leith is, under those circumstances, sufficient to enable you to give the Committee an opinion as to that harbour?—I should think so.

1968. Have you been in the habit occasionally of observing any alteration that may have taken place?—Yes.

1969. What is your opinion with regard to the present harbour of Leith, as to its capability, and as to its usefulness?—It can be but very little improved, or made better than what it is; but very little indeed.

1970. Are you aware of any great alteration that has taken place on the coast there with regard to the depth of water?—There has been a very great alteration in the beach, and in the cliff, both, to my certain knowledge.

1971. What cliff do you allude to?—I allude to the cliff between the western dock and the ground, up to the present Newhaven Pier.

1972. In what has that difference consisted?—A very great difference; the cliff has been reduced in height about six or seven and twenty feet.

1973. Has it sanded up; has there been an accumulation of clay or mud?—An accumulation of sand.

1974. What description of sand?—Very hard sand.

1975. Is it likely to be removed?—With great difficulty.

1976. You consider that it is in a consolidated state?—Yes.

1977. And from your observation, do you think that that accumulation of sand is increasing?—I think it is.

1978. Is that only partial, or is it all along the line of coast there?—I did not observe further than about Newhaven Harbour.

1979. Do you mean the stone pier at Newhaven?—Yes.

1980. Are you aware there have been some proposals for making a western entrance to the present harbour of Leith?—Yes.

1981. You have seen plans for that purpose?—I have.

1982. What effect do you suppose this silting up would have upon any plan to be carried into effect for that purpose?—I think the chance is, that in the course of a very few years it would fill up.

1983. You think that if a western entrance to the present docks at Leith, according to the proposals that you have seen, was to be carried into effect, that it would be difficult to keep that clear, and to prevent it silting up?—It is very possible.

1984. But do you think, or do you not think, it would have that effect?—I think, judging from an analogy of what I have observed, it very possibly might be the case.

1985. Will that silting up, do you think, continue in effect to the same extent, going further westward?—Probably not.

1986. You think not?—I think not.

1987. Consequently you think that the effect produced by this alteration would be more felt at Leith than it would be on the west of Newhaven?—I think so.

1988. With regard to these proposed plans, there is the plan of Mr. Anderson, and the plan of Mr. Cubitt; do either of these plans, by any canals proposed to be cut, interfere at all with the fort, or with the defences?—In fact, the fort is already destroyed, therefore it is very little consequence what they do now; there is only one gun now that is of any use whatever.

1989. But if the fort were to be kept up, these plans would completely upset it, would it not?—The thing is already done, so that it is of very little consequence.

1990. Therefore,

1990. Therefore, with reference to that, you do not think it would be any consequence?—Not the slightest. Colonel *G. Wright.* 17 June 1835.

1991. Are there any observations you have made upon the coast there that you would wish to communicate to the Committee?—I have a small plan in my pocket which, if the Committee would wish to see, I should have great pleasure in showing, which would show the relative position of the ground 30 or 35 years ago to what it is now.

1992. Will you produce that?—[*The Witness produced it.*]

1993. What difference in the altitude of the cliff is there from what it was when you first knew it?—I suppose probably about seven or eight and twenty feet.

1994. Of difference?—Of difference.

1995. What was the height; do you recollect the height?—I do not know, but as far as I can recollect now the diminution is between six and seven and twenty feet.

1996. Then your opinion is, that from the year 1797 to the present day, a diminution in altitude to the amount of 27 feet has taken place in that cliff?—Yes.

1997. That is produced by the accumulation of a body of sand?—Yes, a body of sand immediately below it.

1998. Has the cliff itself tumbled down, or has this been produced entirely by the accumulation of sand?—The cliff itself has not tumbled down much; it is pretty nearly the same at the top; the diminution is entirely from the bottom.

1999. And that cliff that you mention is situated near where the entrance to this proposed canal would be?—Very near.

John Mitchell, Esquire, called in; and Examined.

2000. YOU are a merchant resident at Leith, I believe?—Yes. *John Mitchell,* Esq.

2001. Are you a member of the town council of Leith?—Yes.

2002. How long have you resided and carried on trade at Leith?—I have been 17 years in business on my own account.

2003. What is the nature of your business?—A commission merchant and ship-broker.

2004. Has your attention been drawn to the present state of the shore dues, the harbour and dock dues of Leith?—My attention has been paid to the subject for a long time back, and particularly since the various disputes on the subject began.

2005. Has any public meeting been lately held at Leith on these subjects?—There was a public meeting held lately before the election of our member, at which the inhabitants generally and the members of the public bodies attended, or were expected to attend. It was called by the provost of Leith, at the unanimous request of the council, almost all the people of any influence were present, and many expressed their opinions generally, the opinions of all present (with the exception of five individuals only) including all the principal nautical men, the master of the Trinity House and other members of the Trinity House, was that Mr. Cubitt's plan was the most suitable for the improvement of the port of Leith. Mr. R. Philip was also present, and he stated most distinctly that he had once thought that the eastern entrance was the best entrance in regard to the improvement of the port, but that he had now completely changed his opinion.

2006. Did this meeting express any opinion upon any other points connected with the port of Leith, except with regard to the propriety of making a western entrance?—They also unanimously expressed their opinion on the propriety of not continuing the exaction of the merk per ton for the payment of the clergy of Edinburgh.

2007. How did they propose to indemnify the clergy for the sum which they were to be deprived of?—The general understanding is that the present administration will (as they formerly had nearly arranged) pay the annuity tax or advance money to pay the annuity tax of Edinburgh, the merk per ton being of a similar description, all applied to the payment of the clergy of Edinburgh. In short, the people of Scotland think that the present administration will abolish the annuity tax and merk per ton, because the former liberal administration had arranged to abolish the church rates of England.

2008. Did the meeting you have spoken of come to any resolutions upon any other points than those which you have already mentioned?—We requested that our member would endeavour to use his influence to get an arrangement made for

John Mitchell, Esq.
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the improvement of the port; but he stated distinctly that he would not become pledged to his constituents in any way as to any particular plan.

2009. Did this meeting express any opinion upon the amount of the dues now levied at Leith, or upon the system under which the port is at present managed?—I do not think that we discussed that point, although the general feeling is that the charges are exorbitant.

2010. What is your opinion upon the subject of the present amount of the dues at Leith Harbour?—My opinion is that the charges upon goods are moderate compared with the charges on goods at other ports, that in fact they are generally ower than at the other principal commercial towns in Scotland upon an average, that is including the merk per ton, of which so much unnecessary noise has been made, because the merk per ton is not oppressive upon the commerce of Leith, it is only oppressive because it is improperly applied.

2011. Do you mean in that answer to distinguish the dues paid upon goods from the dues upon tonnage and shipping?—Quite so. I beg leave further to explain that the whole of the charge regarding the building of the docks of Leith has been laid exclusively upon the shipping, not one farthing of rates have been laid upon goods imported into Leith in consequence of all the great and beneficial improvements consequent upon building the docks. Notwithstanding that Leith has increased till lately to a great extent in her commerce, notwithanding the additional shore dues obtained by the increased quantity of goods, have not been made to contribute one farthing towards the building or the maintenance of the docks of Leith.

2012. Can you furnish the Committee with any comparative statement of the amount of dues upon shipping paid at Leith, with those paid at the ports of Dundee or Aberdeen?—I have prepared statements of the various charges, and shall hand them into the Committee; and meantime I beg leave now to state, for the information of the honourable Committee, that the charge for any ship from the Baltic at Leith, for dock dues and harbour dues, is fully 1*s.* 4½*d.* per ton; at Dundee, 3½*d.* per ton; at Aberdeen, from any country, 1½*d.* per ton; at Port Glasgow, from any foreign port, 6*d.*; at Greenock, from Europe, 6*d.*; at Glasgow, from any country, 2*d.* I made a comparative statement of the rates on the importation or landing of goods also. (Some slight deduction has been made; one-fifth deduction, I think, has been lately made on the rates at Dundee, the others remain as they are here stated.) Hemp and flax per ton, at Leith, is 1*s.* 4½*d.*; Dundee, 1*s.* 6*d.*; Aberdeen, 4*s.* Manufactures per ton, of eight barrel bulk, 1*s.* 10*d.*; Dundee, 4*s.*; Aberdeen, 2*s.* Tallow per ton, 1*s.* 4*d.* at Leith; 1*s.* 6*d.* at Dundee; 2*s.* 8*d.* at Aberdeen. Iron, 1*s.* 4*d.* at Leith,; 1*s.* 6*d.* at Dundee; 2*s.* at Aberdeen. Sugar, 1*s.* 7*d.* at Leith; at Dundee, 1*s.* 6*d.*; at Aberdeen, 2*s.* 8*d.* Tar, 2*s.* at Leith; 2*s.* 1*d.* at Dundee; 2*s.* 1*d.* at Aberdeen. Tobacco, 1*s.* 7*d.* at Leith; 4*s.* at Dundee; 3*s.* 4*d.* at Aberdeen. Passengers' luggage, per barrel bulk; nothing at Leith; 6*d.* at Dundee; at Aberdeen, 4*d.* Spirits, 1*s.* 10*d.* at Leith; at Dundee, 4*s.*; at Aberdeen, 2*s.* 8*d.*; and at Glasgow, 1*s.* 4*d.* per ton on all goods. These are the principal staple articles which I considered as applicable to all these various ports; I think it unnecessary to go further into the elucidation of the subject, unless the honourable Committee think it necessary.

2013. Do you believe that the system under which the Dock Commissioners are at present elected, is one that gives general satisfaction at Leith?—I may state that it gives very great dissatisfaction.

2014. Will you state the reasons to the Committee for that dissatisfaction?—We object more to the mode of electing the commissioners from Leith, than the commissioners sent from Edinburgh.

2015. State the mode in which they are elected, and what you think is the mode in which they ought to be elected?—Of the maltmen, a nearly extinct corporation, sometimes so few as four individuals elect their commissioner. The Ship Owners' Society is a small, exclusive, and not even a corporate body. The Merchants' Company consists of about 60 members, but it by no means contains the wealth or the influence of Leith, it being extremely exclusive in its rules.

2016. Each of those elect commissioners?—Yes; the Maltmen, one; the Trades, one; the Ship Owners' Society, one; the Merchants' Company, three; and the Trinity House (so very exclusive that only mariners can be admitted members of it) sends three into the Dock Commission. I beg leave, in reference to the mode of electing commissioners, to point out the excellent system at present followed

followed in Dundee, and it would be well if we were following them in their economical operations as much as possible.

2017. Will you state to the Committee what that method is?—I find that by the Dundee Act there are exactly 21 commissioners for the management of the docks and harbour of Dundee; the same number as we have at Leith. Of the 21, four are elected by the county; six by the town council; six by the guildry; nine by the Incorporated Trades; three by the United Trades; and one by the Seamen's Fraternity: altogether, 21. At present, the inhabitants of Leith have no means of electing a single commissioner to the Dock Commission; the town council have not the power of electing a single commissioner, consequently there is a continual system of re-election going on, and over those commissioners the inhabitants of Leith, generally, have no control whatever.

2018. Do you conceive, if some such alteration as that which you have suggested were introduced into the mode of electing the commissioners for Leith, that there would be any objection to the manner in which the other commissioners are appointed by the Admiralty and by Edinburgh?—We would not object to the mode of electing the commissioners sent from Edinburgh, because they are all elected I may say by those who possess the elective franchise; the whole emanate from the town council, with one exception, the master of the Merchants' Company of Edinburgh.

2019. The other commissioners, who are not elected either by Leith or by Edinburgh, I believe, are appointed by the Admiralty, are they not?—By the Admiralty, and we never find any cause to complain of their partiality or improper conduct.

2020. When you talk of the propriety of making a western entrance to the harbour of Leith, in what manner do you suppose that facilities could be provided for carrying on a work of that description?—I think that we might obtain a sufficient sum of money; an annual sum of money, sufficient to pay the interest of the sum mentioned in Mr. Cubitt's report, by getting the merk per ton, which I have no doubt will ultimately be taken from the clergy of Edinburgh, or applied in a more legitimate way; or if that is objected to, as not likely to be obtained soon, I can prove to the satisfaction of this Committee, that there is about 1,200*l.* of excess paid to officers who are not required in a port where the commerce is rather falling off, and where we formerly paid much smaller sums for salaries when we had a far better and more flourishing state of commerce.

2021. But do you imagine with the present state of affairs of the town council of Edinburgh, and with the great load of Government debt which there is on the Leith property, that it would be possible to borrow a sum of money sufficient to construct so extensive a work as that which is contemplated by Mr. Cubitt's plan?—I think I am prepared to show that the Government would be perfectly safe, and would get a sufficient rate of interest.

2022. If the Government were to decline to advance a further sum of money for this purpose, do you believe it would be possible either for the town council of Edinburgh, or for the inhabitants of Leith, to go into the market and borrow the money to effect this object?—If we were allowed to lay on a tax on passengers, and on passengers luggage, and if we could get the prime gilt, which amounts to about 800*l.* per annum, we would have a sufficient sum to pay the interest of the money required; and if we had an efficient dock commission, in whom the inhabitants of Leith might confide, we might at once, on the responsibility of the Dock Commission, obtain the small sum requisite to get a western entrance, if Government really declined to advance the necessary sum.

2023. Is not the prime gilt part of the dues at present mortgaged to Government for payment of the money which they have already advanced?—No, it is paid under a particular Act of Parliament to the Trinity House for the support of poor mariners; but a general Bill has been passed by the Legislature applicable to the support of all poor seamen, consequently this sum ought not any longer to be paid to the Trinity House of Leith, because that Bill provides amply and fully for the seamen of the kingdom.

2024. Do you conceive it would be justifiable in any Government, or in any Parliament, to take the money that was intended for one purpose and give it to another so essentially different, as the making of a new entrance into the harbour of Leith?—It was considered that the Act of Parliament lately passed would supply ample funds for the maintenance of the poor seamen of Leith. That was the purpose for which the prime gilt was intended, and I should be very sorry to

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see it applied to any other purpose, if the nation finds money to support the seamen otherwise.

2025. The corporation of Edinburgh, I believe, claim and have long exercised the right of disposing of any surplus revenue which they may derive from the harbour of Leith, after providing for the repairs and improvement of that harbour, to any general purpose of the corporation?—The truth is, that they have always taken every penny of shore dues, notwithstanding that originally they paid a mere trifle for the port of Leith at the time when it was merely a creek, and while in the progress of time, by the industry of the inhabitants, the shore dues have been raised from 30*l.* a year to 12,000*l.* a year, they have taken annually the whole of this enormous sum, taking off the contingent outlays of course, into the common purse, mixed it up with their own funds, and never till lately applied any part of it to the proper and legitimate purposes of the port; they have only kept the dock dues on ships applicable to the debt; they set only the amount of the rates of the dock dues against the debt, the annual revenue derived from the shore dues not having originally been applied, as it ought to have been, to the extinction of the debt, but mixed up with the ordinary revenues of the city; this is the cause of the apparent debt, for there would be no real debt if the funds had been properly applied, according to the Act of Parliament, which the magistrates of Edinburgh originally introduced, namely, if the money had been applied in the way they lay down in the 28th of George III. c. 58, there would not exist any debt at present against the docks; however the old Edinburgh town council had taken the whole of the nett shore dues, amounting to about 12,000*l.* a year, into their own hands, and applied it to every purpose foreign to the interests of the port.

2026. Has the right of the corporation of Edinburgh to deal in this manner with the proceeds of the harbour of Leith been disputed?—Never properly disputed; the inhabitants never acted in a body.

2027. You mean by properly, never seriously?—Never seriously legislated.

2028. Has it ever been a subject of litigation?—I don't think it has ever gone to the extent of being before the second division of the Lords of Session; I know there have been some cases before the Lord Ordinary; but I am not aware of any settled point in reference to the subject in that court.

2029. Has any serious doubt of the power of the corporation of Edinburgh having this power been ever expressed on the part of the inhabitants of Leith?—We generally feel that there is great injustice; but I refer to the Acts of Parliament introduced by the Edinburgh town councils.

2030. I do not mean injustice; I want to know whether it is illegal or no. I want to know whether, on the part of Leith you assert this right to be illegal or no; not whether it is an oppressive and unjust right?—In answer to this question, I shall read part of the act or deed, called their Golden Charter, the very words of which are: "Whereas the said provost, bailiffs, council and community of the said burgh, and their successors, by themselves, their treasurer, collectors or farmers in all time coming, take and receive the shore money, exactions, duties and customs hereafter specified (of which they are in present possession) of all goods and merchandize appertaining to freemen, unfreemen and strangers, and of all ships, crears or boats arriving in the Port of Leith, *to be employed in building, enlarging, strengthening and upholding the said Port and Pier of Leith*; that is to say, first, of every ton of goods or merchandize, laden or unladen, in the Port of Leith, 2*s.*; and of the ship, bark or vessel for each ton it carries, 12 pennies; second, For every hundred of timber arriving at the said port to take one piece thereof, and at its going forth, being sold, another piece: third, For every chalder of victual brought in or carried out at the said port 16 pennies; and of the ship, crear or boat eight pennies; and the like of all other goods which are sold by the chalder, and the ship, bark or boat wherein the same are laden as aforesaid." This is the Golden Charter from which all the various oppressive acts have emanated. It was granted by King James, in the year 1603. I have examined the various Acts of Parliament bearing on this subject, and I see no further right than what is specially referred to in this charter.

2031. Has this point ever been submitted for the opinion of any lawyer by the inhabitants of Leith, who supposed that they could dispute this right in the corporation of Edinburgh?—I never heard of the opinion of a lawyer being taken.

2032. But you have stated, that it is a very common opinion of the inhabitants of Leith that the corporation of Edinburgh, with regard to these dues, exercise a right that they don't legally possess?—Quite so.

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2033. Is there not a sum of money amounting to 2,000*l.* a year paid to the commissioners of docks at Leith out of that 12,000*l.* a year you referred to just now?—By one of the most recent Acts there are 1,000*l.* paid out of the shore dues, and 1,000*l.* paid out of the dock dues, for the general maintenance of the port.

2034. Then are the whole of the dock dues levied under the charter you read, or under the authority of some specific statute?—The shore dues are levied under the 28th of George III. chapter 58.

2035. Does that statute not apply the surplus revenues?—One of the sections of this Act says—I shall read it; it is the 38th section; "And in order that the community may be relieved of the sums so to be borrowed, be it enacted by the authority aforesaid, that the said lord provost, magistrates and council, and their successors in office, may make, and they are hereby authorized and required to make and state, at an average sum, the yearly free revenue arising from the port and harbour of Leith for the last five years immediately preceding the passing of this present Act, and to apply the yearly free revenue arising from the said port and harbour of Leith in all time coming hereafter in so far as it exceeds three-fourths of the aforesaid yearly average sum for five years last past, in the first place, in payment of the expenses incurred in passing this present Act, and in the next place in payment and extinction of the sums so to be borrowed, with the interest which shall be due thereon." This clause has been entirely overlooked or neglected, or the magistrates of Edinburgh at the time have given it the go-bye; but there is no express clause in any following Act repealing this clause.

2036. Do you conceive that the salaries of the establishment, connected with the collection of the dues of Leith Harbour, are greater than they ought to be?—They are so much so, that, I think, this is the best proof of the inefficiency of the dock commission.

2037. You had better say whether they are or not?—I should say they are greatly excessive.

2038. Now state your reasons?—Because some of the officers are unnecessary, and some overpaid; I find that at Dundee the whole amount of the charge for officers, a port where there is about one-half more tonnage, the whole amount of the charge for the ordinary officers is 795*l.*

2039. Can you state the officers employed at Dundee, with the salaries attached to those officers?—The harbour or berthing master, 100*l.*; two assistants ditto, 140*l.*; collector, 170*l.*; four clerks for ditto, 235*l.*; treasurer, 50*l.*; clerk to commissioners, 100*l.*; total, 795*l.*

2040. What is the tonnage of the ships and vessels belonging to Dundee?—Up to 1835 there were 285 ships, and the tonnage was 36,321 tons.

2041. What is the number and tonnage of ships and vessels belonging to Leith?—One hundred and eighty-seven at Leith, and the tonnage 22,073 tons.

2042. Can you state to the Committee what are the officers connected with the port of Leith, and what are the salaries attached to those officers?—The salaries at Leith are a superintendent, 400*l.*; assistant ditto, 78*l.*; sub ditto or foreman, 46*l.* 16*s.*; clerk to superintendent, 46*l.* 16*s.*; harbour master, 200*l.*; dock master, 150*l.*; clerk to dock commissioners, 200*l.*; ballast master, 100*l.*; collector and six clerks, say 1,000*l.*; bulkers' clerks, say 200*l*; total, 2,421*l.* 12*s.*

2043. You state in a note, in your publication, that the situation of bulker was abolished?—Yes.

2044. That is not included in the statement you have just made?—No.

2045. And also the situation of head harbour master?—Yes, that was always a sinecure situation; neither is that included.

2046. There are two situations which have been abolished, then, which is over and above what you have now enumerated?—Quite so.

2047. But the present expense of the salaries of these persons amount to 2,421*l.* 12*s.*?—Yes.

2048. Do you know of your own knowledge, that the project of connecting the docks with the deep water entrance at Newhaven, by means of a canal, was estimated for in 1818?—I do.

2049. What was the amount of that estimate?—That was Rennie's plan.

2050. That was the late Mr. Rennie's plan?—Yes, 352,565*l.* 14*s.* 9*d.*

2051. What was that the cost of?—That was the cost of finishing the original plan of the docks, and the deep-water entrance at Newhaven; but there was another

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another plan proposed to build a sea wall, to form a canal of sufficient depth from Newhaven to the docks, which was estimated to cost 191,810*l.* 16*s.* 11*d.*

2052. Was that also Mr. Rennie's?—That was also Mr. Rennie's plan.

2053. Was the first mentioned of these plans a plan for connexion by means of a canal?—No, it was just to finish the original plan of the docks, as at first proposed.

2054. And he considered that that expense was necessary to finish the dock, as at first proposed?—To finish the whole first projected plans.

2055. Do you know if the shore ground to the west of the wet docks belong to the corporation of Edinburgh?—No; I have argued, that as they are not possessed of what their original charter, calls "*Domibus ædificiis et terris*," they cannot have the shore ground; they cannot have the shadow, if they have not the substance.

2056. Then how far do you consider that that property does extend?—What property.

2057. The property of the corporation of Edinburgh to the west?—Not any where beyond the docks.

2058. Did you ever get the opinion of any lawyer upon this subject?—I have taken an extract from the golden charter in the Latin language.

2059. Has this opinion that you have stated ever been supported by that of any lawyer, and has it ever been a subject of litigation, or before the courts?—I believe it has been supported by various lawyers, and I believe it at present is the subject of litigation.

2060. In what manner?—I believe Mr. Scott is now litigating the question, or did lately litigate that question, not exactly upon the same point; but it is the same question: the city of Edinburgh did claim a right of shore to Wardie Brae, and, of course, the question applies from the west of the docks to Wardie Brae.

2061. You are acquainted with Mr. Crichton's plan?—There was a plan formerly proposed by Mr. Crichton.

2062. Do you know whether the magistrates consulted Mr. James Walker on that plan?—They did do so.

2063. Can you state of your own knowledge what Mr. Walker's opinion of it was?—I can state generally, that he thought it would be a very imperfect plan without a covering pier.

2064. Do you know Mr. Chapman's opinion of that plan?—Also to the same effect, that it would rather be injurious instead of beneficial.

2065. You are acquainted with Mr. Anderson's plan?—I have seen it.

2066. And also Sir John Rennie's?—Yes.

2067. Is the point of entrance in these plans far removed, or is it identical?—They seem to be similar; in point of fact, all the three plans are within about 1,000 feet, I think, of each other.

2068. Was there a proposal for a joint stock company, in 1824, for disposing of the docks?—Yes, there was.

2069. What was the nature of that proposal?—The town of Edinburgh proposed, or rather it was suggested by some gentlemen of Leith to the town of Edinburgh to form a joint stock company, and to sell out the shares to whoever would purchase them.

2070. And was that proposal approved of, was it taken into consideration?—It was generally gone into, and the shares bore a premium at one time.

2071. And what put a stop to it?—The people of Leith began to open their eyes and saw the absurdity of the proposal, and that oppression which would ensue by our falling out of the hands of one set of oppressors into the power of others, who would have even less consideration for us.

2072. Now when the large sum which you know was advanced by Government for the purposes of altering and improving the harbour of Leith, what were the advantages held out to induce Government to advance that sum?—The extension of the two piers and a greater depth of water.

2073. What is your opinion with regard to the result of that outlay?—I have paid particular attention to the subject, and I noticed particularly the operation of Mr. Scott, the ballast master, before the extension of the east pier; and all I can say from my own personal knowledge is that by his merely putting down some furze and pieces of wood to retain the furze, the fair way was deepened to almost all the additional depth of water that we have now; by these two piers I should think

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six inches have been gained, but there were about two feet additional gained by merely crossing a sand bank, with a small weir.

2074. Consequently you think that that sum of money has been laid out without producing any very beneficial result?—I hold that the money has been thrown away, at least to a great extent.

2075. What the 240,000*l.*?—No, on the extension of the east pier only.

2076. Then you consider that the sum laid out in these works has been misapplied?—Quite so.

2077. What was the amount of that sum?—Twenty-eight thousand pounds on the east pier.

2078. You have stated that the trade and commerce of Leith have decreased?—It has.

2079. Has that decrease been to any very great extent?—We feel it to a very considerable extent.

2080. Is it progressive, or the result of an accidental circumstance of one year and not another?—I am inclined, looking round me and seeing the flourishing sea ports in various parts of Scotland, I am inclined to attribute it almost entirely to the heavy charges, particularly on ships.

2081. Do you consider it attributable to the heavy charges on shipping?—Yes.

2082. Do you not consider that it is also to be considered as arising from the defective state of the harbour?—That may certainly be considered as one of the objections as far as large ships may be required to come to the port of Leith.

2083. You have stated a comparative view of the harbour and anchorage dues payable at Leith and the different ports on the coast of Aberdeen, Dundee and others, that those chargeable at Leith are very much higher than those at other ports?—Upon the ships?

2084. Yes; is that charge not attended with this additional circumstance, that at the other ports accommodation is obtained, whereas at Leith for ships of any burthen none whatever is obtained?—I may state in answer to the question, that about 9-10ths, I should think, of the commerce of Leith is carried on in ships that can enter the harbour any day in the year whether in neap or spring tides.

2085. Do you consider so much as 9-10ths?—Yes.

2086. Does that include all the steam navigation and all the ships of large burthen that occasionally come to the port?—There are only three steamers that enter the port of Leith of any size.

2087. But there are a great many steamers that come and pay anchorage dues?—Quite so.

2088. Consequently you must take them all into consideration?—Quite so.

2089. Can you furnish the Committee with any statement which would show what has been the decrease of tonnage of late years in shipping at the port of Leith?—I have a statement, which I will be able to furnish the Committee with; I have it not with me, but I will be able to furnish it to night or to-morrow morning.—[*The Witness was requested to do so.*]

2090. Is the want of a low water pier very much felt in the neighbourhood of Edinburgh?—Very much felt.

2091. Do you conceive a low water pier and a wet dock would go a great way towards removing the present inconvenience felt with regard to the trade of Edinburgh, without the constructing of a new harbour?—I should consider that the object would be completely obtained by the execution of a plan similar to Mr. Cubitt's; if not exactly the same as Mr. Cubitt's, by a plan similar to Mr. Cubitt's, the whole object may be obtained, and if I might be permitted to speak, I would say it would perhaps be of some consequence to His Majesty's Government, because it may happen that there may be war, and it would be of the utmost consequence to have a place where steamers or small ships of war might enter and take in stores. I may also state that I have in my hand a plan of the Government property upon that line, and by this plan it will be seen that the greater portion of the adjacent ground belongs to His Majesty, and that land will be very much benefited if a western entrance is obtained.

2092. What land do you allude to?—I allude to the ground occupied by the battery, &c.

2093. Do you mean the land between the stone pier and Leith?—There are three parts: first the west part of the western wet dock, next the ground occupied by the battery and lastly the ground bought by the Admiralty.

2094. Are you aware it was proposed at one time to dispose of that?—I am

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quite aware of that, and such is the present state of doubt and difficulty connected with the port of Leith, that no person will come forward at present to offer for it, or at least not the sum that ought to be paid for it; that ground may be made worth 20,000*l.* or 30,000*l.*, and the Admiralty has really been offering it for 6,000*l.*, now that ground, if a west harbour were made, will become of great value.

2095. Now you have stated, in answer to a question from the Chairman, with reference to the possibility of obtaining means for altering and improving and carrying the plan, supposing it be Mr. Cubitt's plan or any of these other plans into execution—you have stated your opinion with regard to the practicability of raising the sum, provided the Government did not advance any money; do you consider, from your knowledge of the whole of the circumstances connected with the dock, with the shore dues, and every other financial question connected with them, that you think it likely that individuals would, upon the security and under the circumstances that they are at present placed, be induced to come forward and lend a sum of money sufficient to construct these works?—Not under the present system of management, but with another Act of Parliament, constituting a body of commissioners, who would feel themselves perfectly independent in all their operations, at the same time acting conscientiously for the good of the community, not only of Leith, but Edinburgh; I have no hesitation in saying that the sum might be got, but not under the present Act.

2096. You do not mean to say it could be got under the present circumstances?—Certainly not; I was merely going to say, that the cause of not having the power to execute it is that the power is not yet given to us.

2097. Could you, under present circumstances, raise the money; come, that is the point?—I would just merely say, there being no power given to raise the money, it cannot be raised.

2098. Could you, under present circumstances which you are well acquainted with, raise the money?—I will answer the question by saying, if you do not constitute a proper body with powers to raise the money, it cannot be raised.

2099. Do you intend to leave the board of management the same?—No; to have an improved board of management.

2100. In expressing an opinion, that under an improved management it would be possible to raise the money for a west entrance, you assume, I suppose, that the interest upon the present debt is to continue to be paid?—Quite so; even with the interest on the present debt. I do not see any difficulty with a renovated board, with power to lay on a small tax upon luggage and passengers (and there are no taxes of the kind laid on at Leith, while they exist in many other ports in Scotland,) that a sum could be raised for the purpose, principally, of benefiting those passengers which could not be felt as oppressive or unjust.

2101. But in the present state of the dues of the harbour of Leith, would it not be impolitic to add any more to their amount?—It would be no tax upon commerce.

2102. Would it not be a tax upon the shipping?—No.

2103. Do you think you can levy any tax upon small articles brought there by steam packets?—It is managed in this way: the proprietor or agent of the steamer charges the rates at the time he charges the freight.

2104. Do you propose to tax the passengers that cross by the ferry to Fife?—It has been proposed.

2105. But is that a part of your scheme, in saying you can raise this money and pay the interest of the debt at the same time; is it part of your scheme to tax the passengers that come from Fife also?—I see no objection to a scheme of that kind.

2106. Would not the passengers be apt to grumble at that?—Not if only 1*d.* additional is charged on passengers; I appeal to gentlemen here whether they have not experienced very great hardship and difficulty in landing at the pier at Newhaven, and whether they would not give double the sum to be enabled to land dry shod, at any time, on the quay at Newhaven, and whether it would not be a national improvement; considering the extent of the ferry and great thoroughfare.

2107. But I thought you stated you considered that one of the reasons for the decrease of commerce and traffic at Leith, was the great expense that was already incurred by dues; now if you are to go on increasing and adding taxation to that, I of course should suppose that the effect would be increased with regard to that?—I stated

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—I stated that the increased amount of debt and the increased taxation were solely attributable to bad management and misapplication.

2108. You were asked why you thought vessels did not come as frequent to the port of Leith, and you answered you thought it very much attributable to the heavy dues they would be subject to by coming there?—Yes.

2109. Consequently any additional impost would make that objection still greater?—True, but I previously stated it was solely attributable to the fact that goods and the shore dues exacted on goods have not been made to contribute towards the expense of the docks, and I would wish that this be specially impressed upon the minds of the Committee, because, if the goods had been originally fairly and properly taxed, and the money collected applied as the Act of Parliament specially states, we should now be relieved from our present difficulties, and we look to the legislature to protect us from exactions which are really oppressive.

2110. Would it be part of your plan to lessen the tonnage on ships and to tax goods to a greater extent than they are?—Yes.

2111. You have compared the establishment at Leith in point of expense with that at Dundee; are you able to furnish the Committee with a similar comparison between Leith and Glasgow?—I am. At the port of Glasgow, where there have been very great improvements lately and great additional depth of water obtained, and where the superintendence is very arduous on account of the great length of the quay, the harbour master has only 200*l.*, and the first deputy one guinea per week, 50 guineas; the second deputy one guinea per week, 50; together 305*l.* The expense of collection there is only one per cent., and I understand a person lately offered to collect the whole of the dues for a half per cent. I attribute this moderate rate of charge for collection to the circumstance that the Glasgow commissioners have very wisely made only one rate of charge on ships and one rate of charge on goods; the rate of charge on ships is 2*d.* per ton, and the rate of charge on all goods is 1*s.* 4*d.* per ton.

2112. Is there not a superintendent at Glasgow?—There may be a superintendent to superintend the improvement of the Clyde generally, who of course may be considered as an engineer. When we were extending our pier, for instance, we had an engineer, a Mr. Leslie, and paid him accordingly, besides our superintendent.

2113. Is there any other point to which you are desirous of calling the attention of the Committee?—I would wish to state to the Committee, that the extension of the east pier would not benefit the commercial community of Leith, it would effect the means of landing passengers by small open boats, but would not afford any additional facility to merchant ships; it would be no asylum, it would not be a place of safety for ships, and as to goods or heavy articles deposited at the extremity of the east pier, the sea beats over the present walls, and it might carry off both goods and passengers from the eastern pier; on the contrary, a western entrance, similar to Mr. Cubitt's plan, would afford an asylum for ships of a larger class than at present enter the port, and Leith would then become a place of safety for steamers, which it is not at present. I may state, that I examined the last pier particularly on Friday last, and that at one particular part near the tower, where from the interior I have heard the waves dashing to the height of nearly two stories high, the sand has now been elevated or the sea has receded to the extent of 99 feet; I measured this distance from the tower to the high-water mark. I observed further up the harbour the steamer Victoria lying at a considerable declivity, nearly at an angle of 45; I then proceeded to the extremity of the pier off the weir with a measuring rod, and at low water, it being an ordinary spring tide, I found the depth of the water to be eight inches in the middle of the run of water; I then used the iron rod, which was about the length of three feet, and sunk it that depth into the sand; I next morning, that was on the Friday, I next morning (Saturday), the day I left Leith, went to Newhaven pier at the very lowest state of the tide and sailed out in a boat from the extremity of that pier, there being fully two feet of water under her keel; I went round to the west side of the stone pier and found a depth of four feet nine inches; I sounded it at 12 feet west of the chain pier, and found six feet and five feet six inches in two different places; I afterwards sounded in a straight line, between the point of Caroline Park Wall point and the Martello Tower, off Maitland-place, and found a depth of ten feet four inches. I may state, if you will allow me, that this has been a question much spoken of in Newhaven; I happen to be a councillor partly elected by the inhabitants of that district,

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district, and I take considerable interest, as I have always done with regard to the inhabitants, and I made it a point to converse with several of the pilots and other influential inhabitants of the village, and they heard that some statement had been made with regard to the building them out, and——

2114. These are the sentiments of the inhabitants of Newhaven?—Yes; I had the letter which had been written from London by two individuals who have been examined before the Committee; it is a long letter, and I, anxiously desiring to act as impartially as I could by all my constituents, collected as many as I could of them together and read them the letter, they heard the letter, and they said "oh! that is from so and so;" I shall not say from whom, but they said, "we have always been wishing a low water harbour for our boats, and we would be put in much greater safety." I shall now speak from my own knowledge; I may say that they have been frequently applying to the Lord Advocate of Scotland, as one of the commissioners for the herring fishery, for a low-water harbour; this would be amply obtained by Mr. Cubitt's plan. If any thing were to be said as to the difficulty of their pilot boats being beached, inclined stone parapets might be made similar to one that at present exists near the ferry pier, which would afford them more useful accommodation than the present beach of Newhaven. I told the inhabitants at that meeting if they had any thing to state I should state it with the utmost of pleasure when I went to London; they said they had nothing to state, and I believe, in point of fact, that a petition was got up against the eastern entrance and in favour of a western entrance, knowing the advantage they would have of being able to go out and come in at all times of the tide.

2115. What was the opinion of the inhabitants of Leith with regard to the western entrance, proposed by Sir John Rennie in 1827?—That subject, I may say, has never been agitated since that time.

2116. But at that time you can speak of your own knowledge whether they resisted that view of the case, or whether they approved of it?—It was never brought before the inhabitants of Leith prominently.

2117. Do you know whether the general impression of the inhabitants of Leith was favourable to that proposal?—As far as I have had an opportunity of knowing, I have always understood that the western entrance was held as the improvement most likely to suit the port of Leith.

2118. Were there no public meetings called to give an opinion upon the subject of Sir John Rennie's plan?—I was at none of them, and I never heard of any to my knowledge or recollection.

Philip Flucker, again Examined.

Philip Flucker.

2119. DID you hear what the witness before the Committee has stated about beaching the pilot boats at Newhaven?—Yes, I heard it.

2120. Well, what is your opinion on the subject of these inclined planes?—I gave my opinion before that if that plan is to go on from the new dock right along Newhaven we would be a country village.

2121. But you hear a proposal for building inclined planes?—Aye, there is a good deal of promises, but we are not very sure of it.

2122. But supposing it were to be?—Allowing there was to be a place for that we have still a canal between us and the sea. Allowing there was to be a beach, now boats lying in the canal could not get out of that canal at low water without being laid down, that would be impossible.

2123. It is proposed to put these inclined planes in the outer harbour for boats?—But the boats must be driven away from Newhaven Beach altogether; there is to be no beach at the other harbour. There is a high wall; a wall 30 feet high.

The Examination of Mr. *Mitchell* resumed.

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2124. When you state that you collected it to be the opinion of the inhabitants of Newhaven that Mr. Cubitt's plan would not interfere with the present occupation of the pilots who reside at that place, did you consult any of those who have a practical acquaintance with the manner in which that pilot trade is carried on?—Most carefully; because I wished to have the real substantial opinion of every influential man, and among others, Philip Flucker will admit Mr. James Carnie is held to be about one of the most respectable individuals in the town of Newhaven, and he completely coincided with me.

2125. What

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2125. What practical knowledge has he of this subject?—He has been from his childhood a fisherman and a pilot, and moreover, if you will allow me, I will read this letter.

2126. Will you say what the gentleman said?—His opinion completely coincides with mine, that Mr. Cubitt's plan not forming a canal, which Philip Flucker has hitherto thought to be the plan, but going into deep water and securing a landing and shipping place at all times of the tide, will confer a great and an important benefit on the inhabitants of Newhaven. It will enable them, for the first time, to go out and sail in at all times of the tide, and they may lay their boats in ample room at any place behind the pier. I may state, in confirmation of what I have said, that this letter was written by Mr. Philip Flucker and by Mr. Thomas Wilson themselves. Mr. James Carnie gave me this letter, and I called a meeting in the streets of Newhaven, and I read the letter over to them, and asked them if they had any message to send; one of the answers has been, I believe, a petition very numerously signed, objecting to any improvement of the eastern entrance, and approving of a western entrance; it was signed by the preses and many of the fishermen and pilots of Newhaven, and other respectable inhabitants in the town of Newhaven. I do not know whether that petition is before the Committee, but as far as I know, it has been sent to the Lord Advocate for presentation. If it is wished, I shall read this letter.

The Committee.—No.

[*The Witness delivered in the following Papers.*]

TABLES of Dock and Harbour Charges on Ships, and Shore-Dues on Goods at the Port of *Leith*, now for the first time arranged and published, the Shore-Dues being altered into Sterling. By Councillor *Mitchell*.

Explanation of the Charges.

1.—On Ships.

1st. *Dock-dues.*—See the previous remarks, and the Acts quoted and referred to. The Act under which the dock-dues are charged is the 39 Geo. III. cap. 44. sect. 23 & 34.

2d. The charge called *beaconage* and *anchorage*, being 1½*d.* per ton on all vessels, is, in point of fact, the harbour-dues as exigible from vessels before the docks were built: this charge is sanctioned by sect. 34, 28 Geo. III. cap 58.—See the Acts quoted in this work.

3dly. The rates of *harbour pilotage* have remained the same since the year 1788, as far as the shipping is concerned; the city for a long time unjustly exacted from the pilots one-third part of their hard-earned wages; but this deduction was, after much labour on the part of our excellent member, Mr. Murray, and others, departed from. The regulation as to each vessel having a boat, and the rates for the same, have been lately and very properly adopted. The Edinburgh Council are authorized to license and make regulations as to harbour pilots and pilotage by Act 28 Geo. III. cap. 58. sect. 32.

4thly. *Berthage* is exacted from every vessel or boat of 10 tons and upwards, delivering at Leith; the berthage was formerly paid to the harbour or berthing-master.

5thly. *Flaggage* is a charge for the person who hoists the flag or puts up the light at the pier.

It is almost unnecessary to say that the two preceding are not applied as formerly, fixed salaries being substituted; and the charges for berthage and flaggage are now held to be illegally exacted, they not being sanctioned like the other rates, as in Act 28 Geo. III. cap. 58.

6thly. *Ballast.* The charge for ballast was formerly very moderate, not exceeding 9*d.* per ton in all. Clause 31 of 28 Geo. III. cap. 58. sect. 31. says, "Every ship-master making use of sand or gravel for ballast, shall take the same from the place to be appointed by the shore-master or his deputy, for which there shall be paid *the common and usual fees.*" The common and usual fees, 9*d.* ought still to be exacted; 1*s.* 3*d.* per ton for sand *carted from the east shore*, at an expense of not exceeding 6*d.* per ton, is "too much." If taken out of the fairway, there would be less reason to complain. See sect. 22. of 7 Geo. IV. cap 105., and remarks.

The charge of 7*d.* per ton for ballast taken *out* of a vessel is very heavy; and by shipping it overside *into* another vessel paying 1*s.* 3*d.* per ton, the 1*s.* 10*d.* is profit, with the exception of the labourer's wages.

7thly. *Measuring fees*, a charge of one halfpenny per ton, is improperly made for measuring foreign ships. This is not sanctioned by the Act of Parliament referred to; and, in point of fact, the real measurement is performed by the officers of customs, who get no fees for so doing; *the measuring fees do not go into the city's funds*; the collector admitted so (when under examination at my request) before the burgh commission.

8thly. *Dry dock-dues*, or the rates for the use of the dry dock for repairing ships, are exigible, under authority of Act 47 Geo. III. Sess. 2, cap. 3. sect. 29. The schedule of rates in that Act has been lately considerably modified.

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2.—On Goods.

1st. *The shore-dues*, properly so called, are sanctioned by Act 28 Geo. III. c. 58. sect. 26.

2dly. *The shore-dues by general ships*; viz. on all goods by vessels from "London, Hull, Newcastle, and other ports in England," having more than six consignees, charged as shore-dues, merk per ton, and prime gilt, (exclusive of the pontage,) is sanctioned by 28 Geo. III. cap. 58. sect. 29.

3dly. *The merk per ton* goes to the clergy of Edinburgh, and is sanctioned by Act of Scottish Parliament, 22d March 1661, 28 Geo. III. cap. 58. sect. 26., and 7 Geo. IV. cap. 105. sect. 31.

4thly. *The prime gilt*, 1*d.* per ton on goods imported, is so far sanctioned by sect. 29 & 30 of 28 Geo. III. cap. 58., and by the Trinity-House Act, and was intended for "poor and indigent sailors" of Leith, as appears by charter of confirmation, Charles I. 1636. The words in Maitland are: "and also give and grant to the said provost, bailies, council, and community of our said town, the pryme gilt to be paid out of the freight of every tun of merchandise, and be applied towards the maintenance of poor and indigent sailors within the said village of Leith." Granted by James VI. at Whitehall, 3d April 1616. See charter of confirmation, Charles I. 1636; in Maitland, page 260. This penny per ton averages about 800*l.* per annum.

A provision is now made by a recent Act of Parliament for the support of poor, aged, or disabled mariners, so that this exaction ought to cease as soon as the Act comes into operation.

5thly. *The pontage*, 1½*d.* per ton on all goods landed, is sanctioned by Act 47 Geo. III. sess. 2, cap. 3, sect. 25, 26, 27 & 28, and 7 Geo. IV. cap. 105, sect. 33, and was intended to defray the expense of the bridges and the widening of streets, &c.

6thly. *Shed-dues.* The Act 47 Geo. III. sess. 2, cap. 3, and sect. 30, authorizes the building of sheds for the accommodation of the trade in landing goods, and the exacting of 2*d.* per ton on goods put into the sheds, not remaining longer than a week, and 2*d.* per ton for every forty-eight hours thereafter. No charge, however, is made for the use of those sheds built.

The Charges on Ships at the Port of *Leith*.

1. Dock Dues.
2. Beaconage and Anchorage.
3. Pilotage.
4. Berthage.
5. Flaggage.
6. Ballast.
7. Measuring Fees.
8. Dry Dock Dues.

1. Dock Dues.

	Per Ton. s.	d.
For every ship or vessel from any port between Buchaness and Eyemouth, including the great canal and the River Clyde, as far down as Greenock, coming by the canal, the sum of	–	4
By sect. 32 of 47 Geo. III. sess. 2. cap. 3, vessels from any port between Buchaness and Eyemouth, *remaining in dock above four weeks* and not above three months, pay 8*d.* per ton instead of 4*d.*		
From any other port in Great Britain	–	8
From Norway, Sweden, Denmark, Holstein, Hamburgh, Bremen, Holland and Flanders, that is, without the Baltic, no further south than Dunkirk	–	10⅔
From the Baltic, all above the Sound, Onega, Archangel, Jersey or Guernsey, Portugal, France and Spain, without the Straits of Gibraltar, Newfoundland, Madeira or Western Islands	1	1⅓
From without the Straits of Gibraltar, or from America	1	4
From the West Indies, Asia, Africa, or the Cape de Verd Islands	1	8
From every ship coming from Greenland or Davis' Straits	2	–
(But if such vessel shall make a second voyage, she shall be credited for 4*d.* per ton in the charge for such second voyage.)		
For other vessels remaining in the dock above three calendar months 2⅔*d.* for per ton each after month, excepting ships or vessels from Greenland or Davis' Straits, and if any of these return from the fishings clean, they are to be charged as in ballast, which is	–	8
Foreign vessels from any of the before-mentioned places, the aforesaid respective rates, and one-half more; but foreign ships privileged under the Reciprocity Act pay no more than British vessels, the difference being paid by Government.		
For all loaded vessels not breaking bulk, and for all vessels in ballast which do not take in goods coming into the present harbour, provided they do not make use of any of the docks, nor remain in the harbour above four weeks, one-half of the aforesaid respective rates or duties.		
For every vessel going from the port of Leith to any other port in the Frith of Forth, to take in a part of a cargo and return to Leith upon her return	–	2
No ship or vessel pays for more than eight voyages in any one year. This is quite unjust. The London steamers pay no dues for upwards of twenty voyages by this law.		

2. Beaconage

2. Beaconage and Anchorage.

The charge for beaconage and anchorage is 1½ *d.* per ton. The tonnage upon which this charge is made is that contained in the vessel's register, after deducting one-fifth

	s.	d.
	–	1½
	Per Foot.	

3. Harbour Pilotage.

	s.	d.
Every vessel drawing 7 feet water and under, pays	–	10
Ditto 8 ditto	1	–
Ditto 9 ditto	1	1
Ditto 10 ditto	1	2
Ditto 11 ditto	1	3
Ditto 12 ditto	1	4
Ditto 13 ditto and above	1	6

The pilot of each vessel entering the harbour, to have a boat and two men in readiness to attend the vessel.

	Per Ton.	
Each coasting vessel to pay for the boat (besides the depth of water, viz.)	2	6
Each vessel from foreign to pay 3*s.* for the boat, and 3*s.* for each of the two men in the boat (besides the depth of water)	9	–
For every additional man in the boat, if required	3	–

Vessels belonging to Leith of any size, and vessels of 40 tons or less, are not compelled to take pilots.

Besides the preceding rates of harbour pilotage, the following are for vessels taking pilots to Leith Roads from Sea, and *vice versâ*:—

Rates of Frith Pilotage for piloting Ships and Vessels to and from Leith Roads.

From	To	Ships & Vessels from 70 Tons to 100 Tons Measurement. £.	s.	d.	Ships & Vessels from 120 Tons to 250 Tons Measurement. £.	s.	d.	Ships & Vessels from 250 Tons to 500 Tons Measurement. £.	s.	d.
Leith Roads	Inverkeithing, or the Hope	1	1	–	1	4	–	1	6	–
Ditto	Carron Roads	2	2	–	2	5	–	2	8	–
Ditto	Island of May	3	3	–	4	4	–	5	5	–
Ditto	Bell Rock	4	4	–	5	5	–	6	6	–
Ditto	Cromarty	6	16	6	7	17	6	8	18	–
Ditto	Stromness and Kirkwall	10	10	–	11	11	–	12	12	–
Ditto	Lerwick	12	–	–	13	–	–	14	–	–
Stromness	Mull of Cantyre	12	12	–	13	13	–	13	13	–

4. Berthage.

	s.	d.
Vessels from 10 to 25 tons burden, for each coasting voyage pay	1	–
Vessels of the same tonnage from foreign ports	2	6
Ditto from 25 to 50 tons, for each coasting voyage	1	6
Ditto of the same burden from foreign ports	4	–
Ditto of 50 tons, for a coasting voyage	2	6
Ditto of the same burden from foreign ports	5	–
Ditto of 70 tons and upwards	5	–
Ditto loaded with coal, under 20 tons	–	3
Ditto from 20 to 40 tons	–	6
Ditto from 40 to 50 tons	–	9
Ditto above 50 tons	1	–
Foreign vessel of whatever burden	5	–
Vessels coming into the harbour with coals for London or other ports, and unloading any part of their cargo to take in other goods	2	6

N.B.—Vessels coming into the harbour and going out again without breaking bulk, pay no berthage.

5. Flaggage.

	s.	d.
Every vessel, of whatever burden, from foreign ports, for hoisting the flag or putting up the light, pays	2	6
Every vessel of 40 tons and upwards, for each coasting voyage, pays	2	6

6. Ballast.

	s.	d.
For all ballast shipped, per ton	1	3
For all ballast taken out, per ton	–	7

7. Measuring Fees.

Charged by the collector, not authorized by any of the Acts, per ton	–	½

8. Dry Dock Dues.

The charges for the use of the dry dock have been lately altered, and no new table published; they vary, according to the size of the ship and the time used, from 1 *l.* 5*s.* to 18 *l.*, &c.

CHARGES ON GOODS.—TABLE of SHORE-DUES, Merk per Ton, and other DUES, payable to the City of *Edinburgh* and Trinity-House of *Leith*, for all Goods imported to, or exported from, the Harbour of *Leith* by Sea, in Ships of any kind.

[*Note.*—The rate of Shore-dues is chargeable either on Goods landed or shipped; but the other Rates, namely, Merk per Ton, Prime Gilt and Pontage, are only chargeable on Goods landed.]	Freemen, Burgesses and Guild Brethren for Goods on their own account and risk.				Unfreemen, or Unfreemen's Goods consigned to Burgesses and Guild Brethren, or bought by them in the Roads or Harbour of Leith.			
	Shore Dues on all Goods whether Inwards or Outwards, being total charge Outwards.	Merk per Ton on Foreign or English Goods Inwards.	Prime Gilt, 1 *d.* payable to the Trinity-House of Leith, and Pontage, 1½ *d.* per Ton, or 8 Barrel Bulk.	TOTALS, Freemen, Inwards.	Shore Dues on all Goods whether Inwards or Outwards, being total charge Outwards,	Merk per Ton on all Foreign or English Goods Inwards.	Prime Gilt, 1 *d.*; Pontage, 1½ *d.* on all Goods Inwards.	TOTALS, Unfreemen, Inwards.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Ale. *See* Liquors.								
Bark, produce of Scotland, per ton of 20 cwt.	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not produce of ditto, ditto	– 3 1/3	– 4 2/3	– 2 1/2	– 10 1/2	– 6 2/3	– 4 2/3	– 2 1/2	1 1 5/6
Barrels. *See* Casks.								
Beef, produce of Scotland, per last of 12 barrels	– 5 1/3	– –	– 3 3/4	– 9 1/12	– 10 2/3	– –	– 3 3/4	1 2 5/12
—— not produce of ditto, ditto	– 5 1/3	– 10	– 3 3/4	1 7 1/12	– 10 2/3	– 10	– 3 3/4	2 – 5/12
Bottles, manufactory of Scotland, per 5 gross chopin, and in proportion for pints	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not ditto, ditto, ditto	– 3 1/3	– 6 2/3	– 2 1/2	1 – 1/3	– 6 2/3	– 6 2/3	– 2 1/2	1 3 5/6
Butter, produce of Scotland, per last of 12 barrels	– 5 1/3	– –	– 3 3/4	– 9 1/12	– 10 2/3	– –	– 3 3/4	1 2 5/12
—— not produce of ditto, ditto	– 5 1/3	– 10	– 3 3/4	1 7 1/12	– 10 2/3	– 10	– 3 3/4	2 – 5/12
Casks and Barrels, empty, the manufacture of Scotland, per last of 12 barrels	– 5 1/3	– –	– 3 3/4	– 9 1/12	– 5 1/3	– –	– 3 3/4	– 9 1/12
—— not ditto, ditto, ditto	– 5 1/3	1 8	– 3 3/4	2 5 1/12	– 5 1/3	1 8	– 3 3/4	2 5 1/12
Cattle, viz.:—								
Lambs, per 2 score	– 3 1/3	– –	– –	– 3 1/3	– 6 2/3	– –	– –	– 6 2/3
Oxen, each	– 1	– –	– –	– 1	– 2	– –	– –	– 2
Sheep, per score	– 3 1/3	– –	– –	– 3 1/3	– 6 2/3	– –	– –	– 6 2/3
Swine, each	– 1	– –	– –	– 1	– 2	– –	– –	– 2
Coals, viz.:—								
Smithy, or great Coals, per ton	– 2	– –	– 2 1/2	– 4 1/2	– 2	– –	– 2 1/2	– 4 1/2
Cork, per ton of 20 cwt.	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Cutlery Wares, per ton of 8 barrel bulk	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Corn, produce of Scotland, per 16 bolls of 6 bushels for Oats and Barley, and 4 for Wheat	– 5 1/3	– –	– 4	– 9 1/3	– 10 2/3	– –	– 4	1 2 2/3
—— not produce of ditto, ditto, ditto	– 5 1/3	– 10	– 4	1 7 1/3	– 10 2/3	– 10	– 4	2 – 2/3
Flour, produce of Scotland, per 32 bolls	– 5 1/3	– –	– 4	– 9 1/3	– 10 2/3	– –	– 4	1 2 2/3
—— not produce of ditto, per ditto	– 5 1/3	– 10	– 4	1 7 1/3	– 10 2/3	– 10	– 4	2 – 2/3
Meal, produce of Scotland, per 32 bolls	– 5 1/3	– –	– 4	– 9 1/3	– 10 2/3	– –	– 4	1 2 2/3
—— not produce of ditto, per ditto	– 5 1/3	– 10	– 4	1 7 1/3	– 10 2/3	– 10	– 4	2 – 2/3
Fish, viz.:—								
Cod, produce of Scotland, per 20 dozen	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not produce of ditto, ditto	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Hake, produce of Scotland, p' 20 dozen	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not produce of ditto, ditto	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Herrings, produce of Scotland, per 12 barrels	– 5 1/3	– –	– 3 3/4	– 9 1/12	– 10 2/3	– –	– 3 3/4	1 2 5/12
—— not produce of ditto, ditto	– 5 1/3	– 10	– 3 3/4	1 7 1/12	– 10 2/3	– 10	– 3 3/4	2 – 5/12
Ling, produce of Scotland, per 10 doz.	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not produce of ditto, per ditto	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Salmon, produce of Scotland, per 12 barrels	– 5 1/3	– –	– 3 3/4	– 9 1/12	– 10 2/3	– –	– 3 3/4	1 2 5/12
—— not produce of ditto, per ditto	– 5 1/3	– 10	– 3 3/4	1 7 1/12	– 10 2/3	– 10	– 3 3/4	2 – 5/12
Seath, produce of Scotland, per 20 doz.	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not produce of ditto, ditto	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Spelding, produce of Scotland, per 400	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not produce of ditto, per ditto	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Tusk, produce of Scotland, per 20 doz.	– 3 1/3	– –	– 2 1/2	– 5 5/6	– 6 2/3	– –	– 2 1/2	– 9 1/6
—— not produce of ditto, ditto	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Flax, per last of 30 cwt.	– 5 1/3	– 10	– 3 3/4	1 7 1/12	– 10 2/3	– 10	– 3 3/4	2 – 5/12
Grocery Goods, per ton of 8 barrel bulk	– 3 1/3	1 1 1/3	– 2 1/2	1 7 1/6	– 6 2/3	1 1 1/3	– 2 1/2	1 10 1/2
Hemp, per last of 30 cwt.	– 5 1/3	– 10	– 3 3/4	1 7 1/12	– 10 2/3	– 10	– 3 3/4	2 – 5/12

CHARGES ON GOODS.—TABLE of SHORE-DUES, Merk per Ton, and other Dues, &c.—*continued.*

[*Note.*—The rate of Shore-dues is chargeable either on Goods landed or shipped; but the other Rates, namely, Merk per Ton, Prime Gilt and Pontage, are only chargeable on Goods landed.]

	Freemen, Burgesses and Guild Brethren for Goods on their own account and risk.				Unfreemen, or Unfreemen's Goods consigned to Burgesses and Guild Brethren, or bought by them in the Roads or Harbour of Leith.			
	Shore-Dues on all Goods, whether Inwards or Outwards, being total charge Outwards.	Merk per Ton on Foreign or English Goods Inwards.	Prime Gilt, 1 *d.* payable to the Trinity-House of Leith and Pontage, 1½ *d.* per Ton, or 8 Barrel Bulk.	TOTALS, Freemen Inwards.	Shore-Dues on all Goods, whether Inwards or Outwards, being total charge Outwards.	Merk per Ton on all Foreign or English Goods Inwards.	Prime Gilt, 1 *d.*; Pontage, 1½ *d.* on all Goods Inwards.	TOTALS, Unfreemen Inwards.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Hides, produce of Scotland, per 100 hides	– 10	- -	– 5	1 3	1 8	- -	– 5	2 1
—— not produce of ditto, ditto -	– 10	– 10	– 5	2 1	1 8	– 10	– 5	2 11
Hoops, from the place of growth, per 1,500	– 3 ⅓	– 4 ⅔	– 2 ½	– 10 ½	– 6 ⅔	– 4 ⅔	– 2 ½	1 1 ⅚
—— not ditto, ditto - - -	– 3 ⅓	– 10	– 2 ½	1 3 ⅚	– 6 ⅔	– 10	– 2 ½	1 7 ⅙
Iron and Steel, produce of Scotland, per last of 30 cwt. - - - - -	– 5 ⅓	- -	– 3 ¾	– 9 1/12	– 10 ⅔	- -	– 3 ¾	1 2 5/12
—— not produce of ditto, ditto	– 5 ⅓	– 10	– 3 ¾	1 7 1/12	– 10 ⅔	– 10	– 3 ¾	2 – 5/12
Ironmongery Wares, produce of Scotland, per ton of 8 barrel bulk - - -	– 3 ⅓	- -	– 2 ½	– 5 ⅚	– 6 ⅔	- -	– 2 ½	– 9 ⅙
—— not produce of ditto, ditto	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ⅓
Leather, dressed, produce of Scotland, per ton of 8 barrel bulk - - -	– 3 ⅓	- -	– 2 ½	– 5 ⅚	– 6 ⅔	- -	– 2 ½	– 9 ⅙
—— dressed, not produce of ditto, ditto	– 3 ⅓	1 1 ⅓	– 2 ⅓	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ⅓	1 10 ½
Lead, produce of Scotland, per 15 bars	– 2 ½	- -	– 2 ⅓	– 5	– 2 ⅓	- -	– 2 ⅓	– 5
—— not produce of ditto, p' last of 30 cwt.	– 5 ⅓	– 10	– 3 ¾	1 7 1/12	– 10 ⅔	– 10	– 3 ¾	2 – 5/12
Lime, per chalder of 20 cwt. -	– 2	- -	– 2 ⅓	– 4 ⅓	– 4	- -	– 2 ½	– 6 ½
Liquors, produce of Scotland, viz. Ale, Porter, Whiskey, &c. per ton of 4 hhds., or 2 pipes or puncheons - - -	– 3 ⅓	- -	– 2 ½	– 5 ⅚	– 6 ⅔	- -	– 2 ½	– 9 ⅙
—— not produce of ditto, viz. Ale, Brandy, Geneva, Porter, Rum, Wine, and other Liquors, per ditto, ditto -	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Manufactures, produce of Scotland, viz. Cotton, Linen, Silken, Woollen, per ton of 8 barrel bulk - - -	– 3 ⅓	- -	– 2 ½	– 5 ⅚	– 6 ⅔	- -	– 2 ½	– 9 ⅙
—— not produce of ditto, ditto -	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Meal. *See* Corn.								
Oil, produce of Scotland, per ton of 8 barrel bulk - - - - -	– 3 ⅓	- -	– 2 ½	– 5 ⅚	– 6 ⅔	- -	– 2 ½	– 9 ⅙
—— not produce of ditto, ditto - -	– 3 ⅓	1 1 ⅓	– 2 ⅓	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ⅓	1 10 ⅓
Peats, per dale of 20 cwt. - - -	– 1	- -	– 2 ⅓	– 3 ½	– 2	- -	– 2 ½	– 4 ⅓
Pitch, produce of Scotland, per last of 12 barrels - - - - - -	– 5 ⅓	- -	– 3 ¾	– 9 1/12	– 10 ⅔	- -	– 3 ¾	1 2 5/12
—— not produce of ditto, ditto, ditto	– 5 ⅓	– 10	– 3 ¾	1 7 1/12	– 10 ⅔	– 10	– 3 ¾	2 – 5/12
Porter. *See* Liquors.								
Potashes, per last of 30 cwt. - -	– 5 ⅓	– 10	– 3 ¾	1 7 1/12	– 10 ⅔	– 10	– 3 ¾	2 – 5/12
Provisions, not to exceed 3 tons for coasters, and 6 tons for ships going a foreign voyage, per ton of 20 cwt. -	– 3 ⅓	- -	- -	– 3 ⅓	– 6 ⅔	- -	- -	– 6 ⅔
Rags, produce of Scotland, p' ton of 20 cwt.	– 3 ⅓	- -	– 2 ⅓	– 5 ⅚	– 6 ⅔	- -	– 2 ⅓	– 5 ⅚
—— not produce of ditto, ditto - -	– 3 ⅓	1 1 ⅓	– 2 ⅓	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ⅓	1 10 ⅓
Rice, per ton of 20 cwt. - - -	– 3 ⅓	1 1 ⅓	– 2 ⅓	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ⅓	1 10 ⅓
Salt, produce of Scotland, per last of 30 cwt. - - - - - - -	– 5 ⅓	- -	– 3 ¾	– 9 1/12	– 10 ⅔	- -	– 3 ¾	1 2 5/12
—— not produce of ditto, ditto - -	– 5 ⅓	– 10	– 3 ¾	1 7 1/12	– 10 ⅔	– 10	– 3 ¾	2 – 5/12
Slates, or Rooftile, manufacture of Scotland, per 1,000 - - -	– 3 ⅓	- -	– 3 ¾	– 7 1/12	– 6 ⅔	- -	– 3 ¾	– 10 5/12
—— not ditto, ditto -	– 3 ⅓	– 6 ⅔	– 3 ¾	1 1 ¾	– 6 ⅔	1 1 ⅓	– 3 ¾	1 10 ½
Skins, viz.:								
Calf, produce of Scotland, per 300	– 10	- -	– 7 ½	1 5 ½	1 8	- -	– 7 ½	2 3 ½
—— not produce of ditto, per ditto	– 10	– 10	– 7 ½	2 3 ½	1 8	– 10	– 7 ½	3 1 ½
Sheep or Lambs, produce of Scotland, per 60 dozen - - - -	– 10	- -	– 7 ½	1 5 ½	1 8	- -	– 7 ½	2 3 ½
—— not produce of ditto, ditto	– 10	– 10	– 7 ½	2 3 ½	1 8	– 10	– 7 ½	3 1 ½
Soap, produce of Scotland, per 8 barrel bulk - - - - - - -	– 3 ⅓	- -	– 2 ½	– 5 ⅚	– 6 ⅔	- -	– 2 ½	– 9 ⅙
—— not produce of ditto, ditto - -	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Steel. *See* Iron.								
Sugar, Refined, per ton of 8 barrel bulk	– 3 ⅓	1 1 ⅓	– 2 ⅓	1 7 ⅙	– 6 ⅔	1 1 ⅓	– 2 ⅓	1 10 ⅓
—— Raw, per ditto of 20 cwt. - -	– 3 ⅓	– 10	– 2 ⅓	1 3 ⅚	– 6 ⅔	– 10	– 2 ⅓	1 7 ⅙
Tallow, produce of Scotland, per last of 30 cwt. - - - - - - -	– 5 ⅓	- -	– 3 ¾	– 9 1/12	– 10 ⅔	- -	– 3 ¾	1 2 5/12

CHARGES ON GOODS.—TABLE of SHORE-DUES, Merk per Ton, and other Dues, &c.—*continued.*

[*Note.*—The rate of Shore-dues is chargeable either on Goods landed or shipped; but the other Rates, namely, Merk per Ton, Prime Gilt and Pontage, are only chargeable on Goods landed.]	Freemen, Burgesses and Guild Brethren, for Goods on their own account and risk.				Unfreemen or Unfreemen's Goods, consigned to Burgesses and Guild Brethren, or bought by them in the Roads or Harbour of Leith.			
	Shore-Dues on all Goods, whether Inwards or Outwards, being total charge Outwards.	Merk per Ton on Foreign or English Goods Inwards.	Prime Gilt, 1 *d.* payable to the Trinity-House of Leith and Pontage, 1 ½ *d.* per Ton, or 8 Barrel Bulk.	TOTALS, Freemen, Inwards.	Shore Dues on all Goods, whether Inwards or Outwards, being total charge Outwards.	Merk per Ton on all Foreign or English Goods Inwards.	Prime Gilt, 1 *d.*; Pontage, 1 ½ *d.* on all Goods Inwards.	TOTALS, Unfreemen, Inwards.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Tallow, not produce of Scotland, per last of 30 cwt.	– 5 ⅓	– 10	– 3 ¾	1 7 1/12	– 10 ⅔	– 10	– 3 ¾	2 – 1/12
Tar, same as Pitch.								
Tobacco, Leaf, per ton of 20 cwt.	– 3 ⅓	– 10	– 2 ½	1 3 ⅚	– 6 ⅔	– 10	– 2 ½	1 7 ⅓
Wine. *See* Liquors.								
Wood, Foreign, imported directly from the place of growth, per ton of 40 cubic feet	– 3 ⅓	– 4 ⅔	– 2 ½	– 10 ½	– 6 ⅔	– 4 ⅔	2 – ½	1 1 ⅚
[The dues upon cargoes of Timber from Norway are charged according to the Carpenter's measure of the ship, with a deduction of 10 per cent. from the measure; but if the cargo is only Deals or Battens, the full measure is charged, viz. per ton, Carpenter's measure.]								
Wood, Foreign, not imported directly from the place of growth, per ton of 40 cubic feet	– 3 ⅓	– 10	– 2 ½	1 3 ⅚	– 6 ⅔	– 10	– 2 ½	1 7 ⅓
——, Scotch of any kind, ditto, ditto	– 3 ⅓	– –	– 2 ½	– 5 ⅚	– 6 ⅔	– –	– 2 ½	– 9 ⅓
Logwood and other dyeing Woods, ditto, ditto	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅓	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Lignumvitæ, ditto, ditto	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅓	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Mahogany, ditto, ditto	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅓	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Wool, produce of Scotland, per ton of 8 barrel bulk	– 3 ⅓	– –	– 2 ½	– 5 ⅚	– 6 ⅔	– –	– 2 ½	– 9 ⅓
—— not produce of ditto, ditto	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅓	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Yarn, produce of Scotland, per 8 barrel bulk	– 3 ⅓	– –	– 2 ½	– 5 ⅚	– 6 ⅔	– –	– 2 ½	– 9 ⅓
—— not produce of ditto, ditto	– 2 ⅓	1 1 ⅓	– 2 ½	1 7 ⅓	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
Goods, not above enumerated, of the produce of Scotland, per ton of 20 cwt., or 8 barrel bulk	– 3 ⅓	– –	– 2 ½	– 5 ⅚	– 6 ⅔	– –	– 2 ½	– 9 ⅓
—— not produce of ditto, imported direct, ditto	– 3 ⅓	1 1 ⅓	– 2 ½	1 7 ⅓	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
——, not produce of Scotland, brought coastwise from ports in Scotland, pay unfree Rates, whether for freemen or unfreemen	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ⅓	– 6 ⅔	1 1 ⅓	– 2 ½	1 10 ½
BULKAGE RATES by GENERAL SHIPS, viz.:								
Goods brought by Ships with seven or more consignees from London, Hull or Newcastle, per ton of 8 barrel bulk	– 5 ⅓	1 1 ⅓	– 6 ½	2 1 ½	– 5 ⅔	1 1 ⅓	– 6 ½	2 1 ½

The following pay higher Dues by such Ships, owing to the greater bulk per ton:

Cork, 20 cwt. reckoned as 16 barrel bulk, or 2 tons of bulk.
Feathers - - ,, - - 40 ditto, ditto, as 5 tons.
Flax, - - - ,, - - 12 ditto, ditto, or 1 ½ tons.
Hemp - - - ,, - - 12 ditto, ditto - ditto.
Hides - - - ,, - - 12 ditto, ditto - ditto.
Skins - - - ,, - - 12 ditto, ditto - ditto.
Wool - - - ,, - - 22 ditto, ditto, or 2¾ tons.

N. B.—The charges of Shore-Dues by general ships on bulky Articles, have lately been reduced to the above measure by the Edinburgh Council.

Exceptions:—

Empty Casks returned pay no charges, except prime gilt and pontage.
Goods shipped overside pay only half Shore-Dues and merk per ton, (Coals excepted), but full prime gilt and pontage.
Goods brought by Union Canal and shipped at Leith, pay no Shore-Dues outwards.
Goods which paid Shore-Dues at importation, if exported in same state, pay no Shore-Dues,

Note.—Three per cent. discount is allowed the Shipowners upon the Shore-Dues on goods by general Ships from London, Newcastle or Hull; and 7 ½ per cent. is allowed the importer on goods by other Ships, but only upon the Shore-Dues and Merk per ton.

COLLECTOR'S STATEMENT.—REVENUES collected at the SHORE-DUES OFFICE at *Leith*, from 1829 to 1833, both inclusive, furnished by the Collector under an order from the Lord Provost of Edinburgh.

	1829.	1830.	1831.	1832.	1833.	TOTAL.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1. Feus and Yards	2,656 8 1½	2,589 6 8½	2,983 8 3½	2,987 3 7½	2,927 15 2½	14,144 1 11½
2. Dock-dues on Vessels -	5,685 11 1½	7,072 6 11	7,208 15 7	6,662 1 6	6,691 8 6	33,320 3 7½
3. Harbour-dues on ditto, being Berthage, Flaggage, &c.	2,616 11 7½	2,433 18 –	2,541 2 1½	2,399 14 5½	2,413 1 1	12,404 7 3½
4. Shore-dues on Goods -	5,014 1 6	4,593 2 6	4,859 8 10	4,610 4 10½	4,633 18 8	23,710 16 4½
5. Merk, per ton -	3,876 12 1½	3,616 2 7	3,797 3 6	3,414 18 6½	3,180 11 3	17,785 8 –
6. Prime Gilt -	918 4 7½	812 14 3	938 1 6	845 6 5½	753 5 11½	4,267 12 9½
7. Pontage -	1,009 19 6½	1,242 9 8	1,285 2 11½	1,252 10 11	1,182 17 8	5,973 – 9
	21,777 8 8	22,360 – 7½	23,613 2 9½	22,172 – 4½	21,782 18 4	111,705 10 9½

Average Expense of Collection of Revenue for Five Years, as above:

	£. s. d.
Ordinary Expenses - - - - - - - - - - -	1,506 10 4
Extra ditto, including Annuities - - - - - - - - -	410 7 1
Law ditto, incurred concerning the Port and its Revenues - - - -	403 12 10
Paid the Commissioners of Harbours and Docks for Salaries to Officers, Repairs, &c.	4,258 17 3
	£. 6,579 7 6
Deductions:	
Extra Expenses, including Annuities - - - - - £. 410 7 1	
Law ditto - - - - - - - - - - 403 12 10	
	813 19 11
	5,765 7 7
Deduct for Expense in making opening and breakwater at Wooden Pier, for Floating Rafts of Timber to the Sands and Timber-yards, an average of -	1,000 – –
Annual Expense - - - -	£. 4,765 7 7

AN ACCOUNT of the *Dundee* HARBOUR REVENUE, derived from the SHORE-DUES, from the commencement of the Act for Improving the Harbour, July 4, 1815, to May 31, 1834.

PERIOD.	Amount collected by the Commissioners, including Interest.	Expense of Collection, including Graving-dock and Crane-dues.			Net Amount received while under the Collection.	Amount received while under Lease.	Sum exposed at unsuccessfully.	Scale by which the Dues were levied, 100.	Amount they would have yielded at old Rates.	Saved to the Public by the reduction of Rates.	Gain of the Public by the Collection.	Net Amount received under the Collection and Leases.
		Collector and Clerk's Salaries,	Incidental Charges.	Rate per cent.								
	£.	£.	£.	£. s. d.	£.	£.	£.	£.	£.	£.	£.	£.
July 1815 to July 1816	4,411	315	No Acct found.	7 2 9	4,096	– –	– –	75	– –	– –	– –	4,096
July 1816 to July 1817	5,908	350	– –	5 18 6	5,558	– –	– –	100	– –	– –	– –	5,558
July 1817 to May 1818	– –	– –	– –	– –	– –	5,021	– –	100	– –	– –	– –	5,021
May 1818 to May 1819	– –	– –	– –	– –	– –	5,605	– –	100	– –	– –	– –	5,605
May 1819 to May 1820	– –	– –	– –	– –	– –	5,605	– –	100	– –	– –	– –	5,605
May 1820 to May 1821	– –	– –	– –	– –	– –	5,910	– –	100	– –	– –	– –	5,910
May 1821 to May 1822	– –	– –	– –	– –	– –	5,910	– –	100	– –	– –	– –	5,910
May 1822 to May 1823	7,145	362	100	6 9 3	6,683	– –	6,250	87½	8,165	1,020	433	6,683
May 1823 to May 1824	8,379	383	115	5 18 10	7,881	– –	6,400	87½	9,576	1,197	1,481	7,881
May 1824 to May 1825	8,478	386	117	5 18 8	7,975	– –	6,700	75	9,689	1,211	1,275	7,975
May 1825 to May 1826	– –	– –	– –	– –	– –	8,055	– –	75	– –	– –	– –	8,055
May 1826 to May 1827	7,841	300	79	4 16 8	7,462	– –	8,000	75	8,961	1,120	– –	7,462
May 1827 to May 1828	9,622	300	86	4 – 3	9,236	– –	8,000	75	12,027	2,405	1,622	9,236
May 1828 to May 1829	10,134	315	90	3 19 11	9,729	– –	10,000	75	12,667	2,533	– –	9,729
May 1829 to May 1830	11,231	330	99	3 16 4	10,802	– –	10,000	75	14,039	2,808	802	10,802
May 1830 to May 1831	10,599	330	87	3 18 8	10,182	– –	11,000	100	– –	– –	– –	10,182
May 1831 to May 1832	9,386	380	83	4 14 7	8,923	– –	– –	80	10,409	1,023	– –	8,923
May 1832 to May 1833	9,229	380	80	4 15 7	8,769	– –	– –	80	11,536	2,307	– –	8,769
May 1833 to May 1834	9,933	405	90	4 15 6	9,438	– –	– –	80	12,380	2,476	– –	9,438
	112,296	4,536	1,026	– –	106,734	36,106	66,350	– –	109,449	18,100	5,613	142,840

N. B.—The perpetual Bill came into operation June 17, 1830; and the Shore-dues were reduced 20 per cent. November 14, 1831.

John Mitchell, Esq.

17 June 1835.

A Comparative Statement of the Number of Vessels and their Tonnage which entered the Harbour of *Dundee* in 1833 and 1834.

DESCRIPTION.	Tonnage, 1833.	Tonnage, 1834.	Increase, 1834.	Decrease, 1834.
Vessels from Foreign, belonging to Dundee -	24,914	27,487	2,573	—
Vessels from Foreign, not belonging to ditto -	22,234	24,928	2,694	—
Vessels from Coasting, belonging to ditto -	92,570	98,130	5,560	—
Vessels from Coasting, not belonging to ditto -	53,489	51,258	- - -	2,231
Vessels in the River Tay trade - - -	18,818	18,965	147	—
Total Tonnage - - -	212,025	220,768	8,743	—
Number of Vessels entered the Harbour - -	3,018	3,047	29	—

Shore-dues Office, Dundee, June 24, 1834. *S. Robertson*, Collector.

REPORT of Leith Town Council on Charges, &c.

Motion made at the Leith Council for a Committee of Inquiry on the Affairs of the Port of Leith, 31st December 1833.

Mr. Mitchell moved, in terms of the notice given by him at last meeting, the appointment of a committee to consider,—

1. The propriety of a more popular election of the individuals sent from Leith to the dock commission, and the best means to obtain this desirable object.

2. To examine the rates of charges on ships and goods at the port of Leith, and to consider how far it may be proper to suggest to the burgh commissioners, or others in authority, the propriety of a reduction of the charges upon ships in preference to any reduction of the charges upon goods.

3. That as it will be a great benefit to the port to have a distinct account of the rates of charges upon ships and goods published, the committee be authorized to prepare and publish such a statement or account, provided the council is put to no expense.

4. To consider whether a considerable reduction in the dock-dues may not be effected by the abolition of sinecure offices, reduction of high salaries, or by the reduction of the general expenditure.

5. To inquire as to an alleged illegal exaction in name of shore-dues, or in some other name, made by some of the smack companies on goods brought by their vessels.

This motion was seconded by Bailie Veitch, and unanimously agreed to, and the council remitted to Bailie Johnston, Messrs. Liddell, Neilson, Scarth, Mitchell, and Taylor, as a committee, in terms of the motion, three to be a quorum, and Mr. Mitchell to be convener.

Report on the Affairs of the Harbour and Docks, as drawn up by the Committee of the Leith Town Council.

The members of this committee, deeply impressed with the importance of the motion made at the meeting of council on the 31st ult. in regard to the affairs of the port, have to state, that they have given the subjects referred to them their serious consideration, and have now to report—

1st. That five of said commissioners sent from Leith should be elected by the ten pound voters of the five municipal districts, and three by the town council of Leith, and the master of the merchant company of Leith should be *ex officio* a member. By this method the election of the members in Leith would approximate to the mode of electing in Edinburgh, and with the three members nominated by Government, the same number (twenty-one) would be elected as at present; in this way the interests of the community of Leith would be much better attended to than at present, and the objectionable system of continued re-election would be put a stop to.

2dly. As to the port charges on ships and goods, your committee beg to state, that, while no additional shore-dues have been laid on goods for the space of nearly two hundred years, the charges connected with the making the docks, and even the extension of the piers, have, with very bad policy, been laid entirely on the shipping; and on reference to the charges at Dundee, Aberdeen, and other ports, it will be found that the rate of charge on ships compared with the rate of charge on goods, is at Leith far greater in proportion than it ought to be, and this will be evident, when,

3dly, The statement is examined of the charge on ships and goods as required by this council, and prepared by this committee; and your committee recommend that this council authorize the clerk to forward the same to the city council of Edinburgh, requesting their approval of it, if correct, and their concurrence in its immediate publication. The necessity of its immediate publication must be very obvious, when it is known that there has not till now been any statement published of all the charges exigible on ships and goods.

4thly. The

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John Mitchell, Esq.

17 June 1835.

4thly. The inhabitants of Leith have just cause in complaining that, while the trade of Leith is by no means on the increase, a number of unnecessary and sinecure officers exist, and are paid out of the docks and harbour revenue. In former years, and when the trade of Leith was much more considerable than at present, the superintendence of the docks and harbour was efficiently performed by one harbour-master and one dock-master, and the salaries of both were of small amount; but by authority of the last Act, an enormous, and to a great extent unnecessary burden, has been added. Your committee need not point out the following officers. A superintendent, (and he, during the extension of the piers, had the assistance of an engineer paid by the commission)—a sub-superintendent—a clerk to the dock commission—a ballast-master—besides the waste of money on the worse than useless dredging machine, on punts, cranes, policemen, &c. The offices existing previous to the passing of said Act, and which still exist, are harbour-master, dock-master, bulker, head harbour-master. The two last are sinecure situations; the business of bulking (namely the collecting of shore-dues by general ships) ought, as a matter of course, to be transferred to the collector of shore-dues, and the clerks of the bulker's office placed under his superintendence. In collecting the shore-dues and harbour-dues, there are employed one collector, six clerks, besides the three clerks in the bulking department. Your committee need not comment upon the unnecessary number of offices, offices which would not be required in any well-managed establishment, some of which offices are sinecure, some unnecessary, and several overpaid. By a strict and impartial application here of the principle that no man ought to be paid who does not work, or paid more than in proportion to the value of his work, your committee are quite satisfied that a considerable reduction in the charges on ships may be effected. Your committee are farther of opinion that an entire stop should be put to any further alteration or unnecessary expenditure; that the sum authorized to be annually expended on improvements by the Dock Act should be allowed to accumulate until Mr. Chapman's plan is completed, or that the whole sum should be annually applied to this purpose only, or that said sum, or part of it, should be applied in the reduction of the dock-dues, or in the extinction of the debt.

5thly. Your committee appointed a deputation personally to inquire as to the alleged illegal exaction made by some of the shipping companies, "in name of shore-dues, or in some other name, on goods brought by their vessels," and have to report that they have satisfactorily ascertained that, in addition to the rates of freight agreeably to the printed lists published by said companies, and in addition to the shore-dues and merk per ton legally exigible and actually paid by them to the collector, amounting to 2*s.* 1½*d.* per ton, they have been exacting for some time past 2*s.* 8*d.*, being an overcharge of 6½*d.* per ton on all goods brought by their vessels; the committee have also ascertained that the surplus has been paid over to the shipowners' society of Leith, the last payment being 432*l.* 16*s.* 4*d.*, and the same sum is stated to have been paid to William Bell, w. s. 'to account' of lawsuits carried on against the town council of Edinburgh.

Your committee, in concluding their labours, beg to say that they look upon the interests of the inhabitants of Edinburgh and Leith as one; they feel quite assured that both the city council of Edinburgh and the town council of Leith, as representatives of the two communities, are actuated with the purest motives and the best intentions, and when due time is given for these principles to be acted on, they cannot but hope that the prosperity of the city and town will be secured and placed on a lasting basis.

(signed) *J. Mitchell*, Convener.

TABLE of HARBOUR RATES at the Port of *Greenock*.

ON SHIPPING.	PER REGISTER TON.		
	Inwards.	Out-wards.	Per Voyage.
Class.	*d.*	*d.*	*s.* *d.*
1st. All British Vessels, of every description, arriving or departing from the Port of Greenock, to or from Glasgow, or any of the intermediate Ports on the River Clyde - - - - - - - - - -	½	½	– 1
2d. To or from any place inside of the Cumbray-Head, also from or to all places on the Forth and Clyde Canal, West of Grangemouth, including the Union and other Canals leading into it - - - - - -	1	1	– 2
3d. To or from all places betwixt the Cumbray, on the North, and the Mulls of Galloway and Kintyre, on the South, including Lochryan, Lochfine, &c. in these limits; also by the Forth and Clyde Canal, to or from places on the Firth of Forth, extending from Stirling to Fifeness, on the North side, and Dunbar, on the South; likewise by the Crinan Canal, to or from all ports and places in the Highlands, situated betwixt West Lock Tarbet on the South, and the North end of the Isle of Skye, including Skye, Mull, Coll, Tiree, Islay, Jura, and other Islands betwixt these and the Main Land - - - - - -	1½	1½	– 3
4th. To or from any place situated betwixt the Mulls of Galloway and St. David's Head, on the British side of St. George's Channel, including the Isle of Man; and on the Irish side from Tuskar, along the East and North Coasts of the Island to Torry; and from the Mull of Kintyre to Cape Wrath, including all the Hebrides; also by the Forth and Clyde Canal, to or from places betwixt Fifeness and Kinnaird's-Head, and betwixt Dunbar and Flamborough-Head - - - - - -	2	2	– 4

(*continued.*)

John Mitchell, Esq.

17 June 1835.

TABLE of HARBOUR RATES at the Port of *Greenock—continued.*

ON SHIPPING.	PER REGISTER TON. Inwards.	Outwards.	Per Voyage.
Class	*d.*	*d.*	*s.* *d.*
5th. To or from all places in Ireland, extending from Torry along the West and South Coasts of the Island to Tuskar; and in England and Wales betwixt the Lands End and St. David's-Head; also in Scotland betwixt Cape Wrath and Kinnaird's-Head, including the Orkney and Shetland Islands; likewise to or from places North of Flamborough-Head, navigating otherwise than by the Canals - - -	3	3	– 6
6th. To or from all places on the East and South Coasts of England, extending from Flamborough-Head to the Lands End including Scilly Islands - - - - - - - - - - - - - -	4	4	– 8
7th. To or from any Port or Place in Europe, or Island in the European Seas - - - - - - - - - - - - - -	6	6	1 –
8th. To or from any Port or Place in the British Provinces of Canada, New Brunswick, Nova Scotia, Newfoundland; Iceland; the Greenland and Davis'-Straits Fisheries; and all ports or places on the South Coast of the Mediterranean Sea - - - - - - - - -	7	7	1 2
9th. To or from all Ports or Places in the United States of America, West Indies and East Coast of America, North of the River Amazon; also the West Coast of Africa, from the Straits of Gibraltar to the Equator, including the Islands of these Coasts - - - - - - - -	8	8	1 4
10th.* To or from any Port, Place or Island lying betwixt the River Amazon and Cape Horne, in South America; and between the Equator and Cape of Good Hope, on the West Coast of Africa - - - - -	9	9	1 6
11th.* To or from all Ports, Places or Islands South and East of the Cape of Good Hope and West of Cape Horne - - - - - - - -	10	10	1 8
12th. All Vessels navigating under Foreign Flags to pay double the foregoing rates, corresponding to their respective voyages.			
13th. All Vessels, British or Foreign, arriving at or departing from the Port of Greenock, in Ballast, and all Steam Packets employed solely in carrying passengers, to be charged only a moiety of the rate corresponding to their voyage.			
14th. Whenever any Vessel propelled by Steam, whether employed in carrying goods, partly goods and passengers, or passengers solely, shall have entered inwards and cleared outwards so frequently as to have paid 13*s.* 4*d.* per ton of Port-Charges, namely of Harbour Rates, Police Dues, Anchorage and Water-Money inclusive, as chargeable to Shipping: or when any Sailing Vessel shall have entered inwards and cleared outwards so often as to have paid 6*s.* 8*d.* per ton, including the above enumerated dues, such Vessels shall be exempt from further payment of Port-Charges, during whatever part of twelve current months may be unexpired from date of making payment of first portion of said 13*s.* 4*d.* or 6*s.* 8*d.* as the case may be. Owners or Masters of either description of shipping wishing to save trouble may have a clearance of twelve months by paying at the Harbour Dues Office 13*s.* 4*d.* per ton for Steamers, and 6*s.* 8*d.* per ton for Sailing Vessels. The sums arising from Vessels compounding as before mentioned, will fall to be allocated among the different trusts interested.			
15th. All Vessels not bound to or from the Port of Greenock, but taking shelter in either of the Harbours thereof, to pay, in addition to the Anchorage Dues, one penny per ton.			
16th. All Vessels at clearing outwards shall pay the rate applicable to the most distant Port of their intended voyage.			
17th. The proposed rates in the foregoing Table, are altogether exclusive of the Harbour Police Dues on Shipping, and of the Town Dues for Anchorage and Water Money.			
HARBOUR POLICE RATES.			
All Ships or other Vessels trading to or from Ports, Bays or Islands, in Classes 7th, 8th, 9th, 10th, and 11th of the above Table - - - - - -	$-\frac{1}{2}$	$-\frac{1}{2}$	– 1
Ditto - ditto - ditto Classes 3d, 4th. 5th and 6th, ditto - ditto - - -	$-\frac{1}{4}$	$-\frac{1}{4}$	– $-\frac{1}{2}$
Steam-Packets, trading on the above Lines, from the frequency of their voyages, a moiety - - - - - - - - - - - - - -	$-\frac{1}{8}$	$-\frac{1}{8}$	– $-\frac{1}{4}$
All Vessels, of every description, plying in Classes 1st and 2d of Table, 1 $\frac{1}{2}$ *d.* per ton per annum.			

* The 10th and 11th Classes cannot at present be charged a higher rate than 8*d.* per ton each way: viz. 1*s.* 4*d.* per voyage; the proposed alteration is merely introduced into the Schedule to call attention to it when the next Act of Parliament is applied for.

SCHEDULE of RATES and DUTIES leviable on GOODS at the Harbour of *Dundee*, by Act of Parliament 11 Geo. IV.

Observation:—Reduced one-fifth in 1831, both on Goods and Ships.

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Alabaster	2	–	per ton
Ale, Strong	–	2	per barrel bulk
Almonds. *See* Grocery.			
Alum, Rock	1	–	per ton
Apples	–	1	per bushel
Argol	2	–	per ton
Ashes, Pot or Pearl	1	6	per ton
Weed and Wood	1	6	per ton
Bacon or Hams	–	3	per barrel bulk
Barilla	1	6	per ton
Bar Iron. *See* Iron.			
Bark, Oak	1	6	per ton
Quercitron	2	–	per ton
Barley. *See* Corn.			
Shelled or Pearl Ditto. *See* Corn.			
Basket Rods	–	1	per bundle.
Baskets, viz.			
Under 12 in. diameter	–	1	per dozen
Above 12 in. diameter	–	2	per dozen
Bay Berries. *See* Berries.			
Beans. *See* Corn.			
Beef or Pork	–	3	per barrel bulk
Beer, Spruce	–	2	per barrel bulk
Berries, viz.			
Bay	–	6	per barrel bulk
Juniper	–	6	per barrel bulk
Yellow	–	6	per barrel bulk
Cran	–	6	per barrel bulk
Biscuit	1	–	per ton
Blacking	–	3	per cwt.
Black Lead. *See* Lead.			
Bones of Cattle	–	3	per ton
Books	–	6	per barrel bulk
Bottles, of Green or Common Glass, not less than pints	–	2	per gross
Bottles, Broken	–	3	per ton
Bran	–	8	per chaldron
Brandy. *See* Spirits			
Brass	–	2	per cwt.
Bricks	1	–	per 1,200
Brimstone	1	6	per ton
Bristles	–	6	per cwt.
Bulrushes	1	–	per load
Bulls. *See* Cattle.			
Butter	–	4	per barrel bulk
Blubber	1	–	per 252 Im. gal.
Barrels, Empty Herring	–	3	per dozen
Calves' Velves	–	2	per cwt.
Candles	2	6	per ton
Cane Reeds	–	6	per 1,200
Carpets. *See* Cloth.			
Cattle, viz.			
Bulls	–	6	each
Cows	–	6	each
Calves	–	3	each
Horses	1	–	each
Oxen	–	6	each
Pigs	–	2	each
Sheep	–	2	each
Lambs	–	1	each
Caviare	–	6	per barrel bulk

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Chalk	–	3	per ton
Cheese	2	–	per ton
Chesnuts	–	6	per barrel bulk
Cider	–	2	per barrel bulk
Cinnamon. *See* Grocery.			
Clay, viz.			
China Clay or Stone Clay	–	6	per ton
Pipe Clay	–	6	per ton
Cochineal	1	–	per cwt.
Cocoa	3	–	per ton
Coffee	3	–	per ton
Cocoa Nuts	–	3	per 100
Copper	3	–	per ton
Old	1	6	per ton
Ore	–	6	per ton
Copperas	–	6	per ton
Coral	–	6	per cwt.
Cordage	1	6	per ton
Cork	–	3	per barrel bulk
Corn and Meal, viz.			
Barley	–	1 ½	per quarter
Shelled and Pearl	–	1 ½	per quarter
Beans	–	1 ½	per quarter
Indian Corn	–	1 ½	per quarter
Meal	–	1 ½	per quarter
Malt	–	2	per quarter
Oats	–	1 ½	per quarter
Oatmeal	–	1 ½	per boll
Pease	–	1	per quarter
Rye	–	1 ½	per quarter
Wheat	–	2	per quarter
Flour	–	2	per sack
Carrots	–	4	per ton
Cow, Ox or Bull Hair. *See* Hair.			
Cows. *See* Cattle.			
Cranberries. *See* Berries.			
Crystal	–	6	per barrel bulk
Culm	–	4	per ton
Currants. *See* Grocery.			
Coals, Scots	1	–	per chaldron
English	1	–	per chaldron
Smithy	1	–	per chaldron
Cinders	–	8	per chaldron
Codilla	1	–	per ton
Cloth, Brown or Bleached Linens, viz			
Osnaburgs	–	1	per piece
Sheeting	–	1	per piece
Dowlas	–	1	per piece
Ducks	–	1	per piece
Ravenducks	–	1	per piece
Ticklenburgs	–	1	per piece
Drillings	–	1	per piece
Shirtings	–	1	per piece
Silesias	–	1	per piece
Hessians or Wrappering, 40 inches, and under	–	– ¾	per piece
Hessians or Wrappering, above 40 inches	–	1	per piece
Sailcloth	–	– ¾	per piece
Bagging and Sacking of all kinds, 34 inches, and under	–	– ½	per piece

(*continued.*)

SCHEDULE of Rates and Duties leviable on Goods at the Harbour of *Dundee—continued.*

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Cloth, Brown or Bleached Linens,—*continued.*			
Bagging and Sacking of all kinds, above 34 in.	–	– ¾	per piece
Pimento Bagging	–	– ¾	per piece
Tarpaulings	–	– ¾	per piece
Browns	–	– ¾	per piece
Linen Cloth, when cut down into shorter lengths, to pay according as the original piece would have been rated.			
Sacks, made	–	– ½	per 25
All Linen Cloth, imported for the purpose of being bleached	–	2	per barrel bulk
Clothiery	–	6	per barrel bulk
Haberdashery, comprehending Cotton and Silk Goods	–	6	per barrel bulk
Hosiery	–	6	per barrel bulk
Cement	1	–	per ton
Coaches, Chaises, Gigs, and other similar Carriages	–	4	per barrel bulk
Chimney Cans	1	–	per 100
China Ware	1	–	per hhd.
Dogs	–	6	each
Drugs	–	9	per barrel bulk
Earthenware	–	6	per crate
Ditto in bulk	2	6	per 100 dozen
Eggs	–	3	per barrel bulk
Elephants' Teeth	–	6	per cwt.
Emery Stone	–	1	per cwt.
Feathers	–	6	per cwt.
Figs. *See* Grocery.			
Fish Oil. *See* Oil.			
Flint Stones	–	4	per ton
Flower Roots	–	3	per barrel bulk
Furrier's Waste	–	3	per ton
Flax	1	6	per ton
Fish, salted dry	5	–	per boat
Ditto	1	–	per ton
Garden Seeds. *See* Seeds.			
Geneva. *See* Spirits.			
Ginger	–	2	per cwt.
Preserved	–	3	per cwt.
Glass	–	6	per crate
Broken	–	4	per ton
Glue	–	1 ½	per cwt.
Goats' Hair. *See* Hair.			
Grapes	–	1	per jar
Grease	1	–	per ton
Grocery, viz.			
Almonds	–	6	per barrel bulk
Cinnamon	–	6	per barrel bulk
Currants	–	6	per barrel bulk
Figs	–	6	per barrel bulk
Pepper	–	6	per barrel bulk
Pimento	–	6	per barrel bulk
Plums	–	6	per barrel bulk
Prunes	–	6	per barrel bulk
Raisins	–	6	per barrel bulk
Gunpowder	–	3	per cwt.
Ginseng	–	6	per cwt.

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Hair, viz.			
Cow, Ox or Bull	–	2	per cwt.
Goats' Hair or Wool	–	2	per cwt.
Horse	–	2	per cwt.
Hair Powder	–	6	per cwt.
Hardware	–	4	per barrel bulk
Hats	–	4	per barrel bulk
Hay	1	–	per ton
Hemp, rough	1	6	per ton
Herrings	–	1 ½	per barrel
Hides	2	–	per 100
Honey	–	2	per cwt.
Hoops of Wood, all of the size of Puncheon Hoops, and under	–	9	per 1,200
All above	1	–	per 1,200
Iron	1	–	per ton
Hops	–	4	per cwt.
Horns, Slugs and Tips	–	1	per 1,200
Horse. *See* Cattle.			
Household Furniture	–	2	per barrel bulk
Husbandry Utensils	–	2	per barrel bulk
Indian Corn or Meal. *See* Corn.			
Indigo	1	–	per barrel bulk
Ink	–	2	per barrel bulk
Iron, viz.			
Bar, Bolt and Rod	–	6	per ton
Plate, Sheet and Forged	1	–	per ton
Made Work	1	6	per ton
Hoops. *See* Hoops.			
Old Iron	–	6	per ton
Cast Iron Goods	–	9	per ton
Ditto, commonly called Ironmongery	1	6	per ton
Old or Broken Cast Iron	–	4	per ton
Pig	–	4	per ton
Ivory	–	6	per cwt.
Junk, Old	–	6	per ton
Juniper Berries. *See* Berries.			
Kelp	–	6	per ton
Lard	2	–	per ton
Latten Black	2	–	per ton
Lead	–	9	per ton
Black	2	–	per ton
Ore	1	–	per ton
Red and White	2	–	per ton
Shot	1	–	per ton
Leather, tanned and dressed	2	–	per ton
Lemons	–	3	per chest
Limes	–	3	per cask
Linseed. *See* Seed.			
Oil. *See* Oil.			
Lime	–	6	per chaldron
Madder	2	–	per ton
Madder Roots	1	6	per ton
Malt. *See* Corn.			
Manganese	1	–	per ton
Marble	1	–	per ton
Matts, Bass	–	3	per 120
Meal, Indian. *See* Corn.			
Medicine	–	9	per barrel bulk
Mill Waste	–	3	per ton
Mohair Yarn	–	2	per cwt.
Molasses	–	9	per ton

SCHEDULE of Rates and Duties leviable on Goods at the Harbour of *Dundee—continued.*

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Morels	–	4	per cwt.
Moss Rock	1	6	per ton
Mum	2	–	per ton
Manure	–	1	per ton
Meal. *See* Corn.			
Machinery	–	2	pe barrel bulk
Musical Instruments	–	6	per barrel bulk
Nuts	–	1	per bushel
Nutmegs	1	–	per cwt.
Oakum	1	–	per ton
Oats } *See* Corn. Oatmeal }			
Oil, viz.			
Linseed	2	–	per tun
Palm	2	–	per tun
Rape	2	–	per tun
Turpentine	2	–	per tun
Vitriol	–	2	per bottle
Whale, or Train	1	6	p' tun of 252 gal.
Sperm	2	6	p' tun of 252 gal.
Ochre	1	–	per ton
Onions	–	1	per bushel
Oranges. *See* Lemons.			
Orchella Weed	2	–	per ton
Ore of Iron. *See* Iron.			
Ore of Lead. *See* Lead.			
Paper, viz.			
Writing and Printing Paper	–	6	per barrel bulk
Packing Paper	–	2	per barrel bulk
Pearl Barley. *See* Corn.			
Pease. *See* Corn.			
Pelts	2	–	per ton
Pepper. *See* Grocery.			
Perry	–	2	per barrel bulk
Pig Iron. *See* Iron.			
Pigs. *See* Cattle.			
Pigs' Heads	–	3	per barrel bulk
Pimento. *See* Grocery.			
Pitch	–	2	per barrel
Plants of Trees or Shrubs	–	1 ½	per barrel bulk
Plaster of Paris	1	–	per ton
Plums. *See* Grocery.			
Pumice Stones	1	–	per ton
Pork. *See* Beef.			
Porter, in casks	–	2	per barrel bulk
Porter, in bottles	–	1	per barrel bulk
Potatoes	–	4	per ton
Powder of Lead. *See* Lead.			
Prunelloes	–	6	per barrel bulk
Prunes. *See* Grocery.			
Peats	–	1	per 100
Passengers' Luggage	–	6	per barrel bulk

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Quercitron Bark. *See* Bark.			
Quills, undressed	–	.	per 1,000
Rags, viz.			
Linen	–	6	per ton
Other Rags, Old Ropes and Old Leather	–	3	per ton
Raisons. *See* Grocery.			
Rape Cakes	1	6	per ton
Rape Seeds. *See* Seed.			
Red Lead. *See* Lead.			
Rice	2	–	per ton
Rock Moss. *See* Moss.			
Rosin	–	2	per barrel bulk
Rum. *See* Spirits.			
Rye. *See* Corn.			
Salt	1	4	per chaldron
Salt, Rock, in lump	–	6	per ton
Saltpetre	2	6	per ton
Seed, viz.			
Flax and Rape Seed	–	6	per hogshead
Ditto	–	3	per barrel
Ditto, in bulk	–	2	per barrel
Clover	–	6	per bag of 3 cwt.
Garden Seeds	–	6	per barrel bulk
Hemp and Canary	–	6	per barrel bulk
Rye Grass	–	3	per 8 bushels
Sheep. *See* Cattle.			
Shumach	1	6	per ton
Skins, viz.			
Calf	–	3	per score
Sheep	–	3	per score
Deer	–	3	per score
Kid	–	3	per score
Lamb	–	3	per score
Seal	–	3	per score
Slates	1	–	per 1,200
Slate Pencils and Slates	–	4	per barrel bulk
Smelts	–	2	per cwt.
Snuff	–	6	per barrel bulk
Soap	1	6	per ton
Soapers' Waste	–	3	per ton
Ditto Salts	–	6	per ton
Spermaceti	2	–	per ton
Stones, viz.			
Rubble Freestone	–	– ¼	per ton
Hewn Ashlar Freestone	–	1	per ton
Rough Ashlar Freestone	–	– ½	per ton
Rubble Causeway	–	– ¼	per ton
Causeway Stones, dressed	–	– ½	per ton
Pavement	–	– ½	per ton
Curb	–	– ½	per ton
Foreign Grave-Stones	5	–	each
Home, ditto	2	6	each
Sithe-Stones	–	– ½	per score
Grindstones	–	1	each
Millstones	1	–	each
Spirits, viz.			
Foreign	–	6	per barrel bulk
British	–	4	per barrel bulk

(*continued.*)

SCHEDULE of Rates and Duties leviable on Goods at the Harbour of *Dundee—continued.*

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Starch	–	3	per barrel bulk
Steel	1	6	per ton
Sugar, Raw	1	6	per ton
Sugar, Refined	2	–	per ton
Soda	1	6	per ton
Stucco	–	6	per ton
Smalts	2	6	per ton
Salmon	–	3	p' box of 4 kitts
Sugar Moulds	–	9	per 100
Tallow	1	6	per ton
Tamarinds	–	3	per cwt
Tanners' Waste	–	3	per ton
Tar	–	2	per barrel
Tea	–	6	per chest
Thread	–	4	per barrel bulk
Tin of all kinds	2	–	per ton
Tobacco	–	6	per barrel bulk
Tongues, Smoked	–	1	per dozen
Tongues, Pickled	–	3	per barrel
Tortoise-Shell	–	6	per cwt.
Tow	1	–	per ton
Toys	–	3	per barrel bulk
Treenails	–	6	per 1,200
Turmeric	–	1	per cwt.
Twine	–	2	per cwt.
Tiles	1	–	per 1,200
Turnips	–	4	per ton
Valonia	2	–	per ton
Vases or Sculptured Marble	–	6	per barrel bulk
Verdigris	2	–	per ton
Vermillion	–	6	per cwt.
Vinegar	–	2	per barrel bulk
Vitriol. *See* Oil.			
Willow Reeds	–	– ½	per bundle
Wine, in casks	–	6	per barrel bulk
Ditto in bottles	–	3	per barrel bulk
Whalebone, dressed or undressed	1	6	per ton
Wood, Foreign, viz.			
Batons	–	9	per 50 c. ft.
Boards, Oak or Wainscot	1	–	per 50 c. ft.
Boards, Paling	–	4	per 120
Deals	–	9	per 50 c. ft.
Deal-Ends	–	9	per 50 c. ft.
Firewood	–	4	per fathom
Handspikes	–	3	per 120
Laths	–	6	per fathom
Masts, Yards, or Bow-sprit Wood, viz			
6 inches in diameter, and under 8 inches	–	6	per 50 c. ft.
8 inches, and under 12 inches	–	9	per 50 c. ft.
12 inches and upwards	1	–	per 50 c. ft.
Oak Planks	1	–	per 50 c. ft.
Oars and Oar-Rafters	1	–	per 120

ARTICLES of IMPORT and EXPORT.	Rates. s.	d.	Per Weight or Measure.
Wood, Foreign—*continued.*			
Rickers, Boat-hooks and Hoops	–	9	per 120
Spars	–	9	per 50 c. ft.
Cart-wheel Spokes	–	2	per 60 pieces
Staves, Pipe, from any port in Europe, above 50 inches long	–	10	per 120
Under 50 inches long	–	6	per 120
From the United States of America, above 50 inches long	–	3	per 120
Hogsheads, under 50 inches long	–	3	per 120
Barrel, and all under 50 inches long	–	1	per 120
Pipe, from any of the British colonies or plantations, above 50 inches long	–	8	per 120
All under 50 inches long	–	5	per 120
Fir	–	9	per 50 c. ft.
Oak	1	–	per 50 c. ft.
Pine	–	9	per 50 c. ft.
Hard Wood	1	–	per 50 c. ft.
Ufers	–	9	per 50 c. ft.
Wainscot Logs	1	6	per 50 c. ft.
Delivered by weight, viz.			
Barwood	1	6	per ton
Boxwood	1	6	per ton
Brazil Wood	2	–	per ton
Camwood	2	–	per ton
Ebony	1	6	per ton
Fustic	1	6	per ton
Lignumvitæ	1	6	per ton
Logwood	1	6	per ton
Mahogany	1	6	per ton
Nicaragua Wood	2	–	per ton
Red Wood	1	6	per ton
Sassafras	1	6	per ton
Wood, Home, viz.			
Fir	–	6	per 50 c. ft.
Hard Wood	–	8	per 50 c. ft.
Planks and Deals, Fir	–	6	per 50 c. ft.
Planks and Deals, Hard Wood	–	8	per 50 c. ft.
Cart-wheel Spokes	–	1	per 60 pieces
Hogshead Staves	–	2	per 120
Barrel Staves	–	1	per 120
Wool	–	2	per cwt.
Worsted Yarn. *See* Yarn.			
Whitening	–	6	per ton
Yarn, viz.			
Lint	2	–	per ton
Cotton	1	6	per ton
Tow	1	6	per ton
Hemp	1	6	per ton
Worsted	–	2	per cwt.
Yeast	–	2	per barrel bulk

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All goods shipped over-side to pay one-half dues only.

All goods having paid shore-dues inwards are exempted from dues when shipped outwards, if they be in the original state.

All goods having paid shore-dues outwards, are exempted from dues when brought inwards, if they be returned goods to the original shipper and in the original state.

All returned empty boxes, barrels, bags, sacks and pack-sheets are exempted from dues.

All goods not enumerated in the above Schedule to be charged by the Trustees in proportion to other goods of similar bulk and value specified in the above Schedule.

All goods, merchandize, wares or commodities whatsoever, and all beasts conveyed in licensed passage-boats from any of the Ferries of Ferry-Port-on-Craig, Newport, Woodhaven or Balmerino, in the county of Fife, to the Ferry of Dundee,—or from the Ferry of Dundee to any of those Ferries,—are exempted from payment of shore-dues.

Lime and coal landed within the precincts of the Harbour to the eastward of the Rood Yards, and to the westward of the Magdalen Yard, to pay one-half of the dues in the above Schedule.

Five cubic feet, not exceeding two and a half hundred-weight, to be rated a barrel bulk; but when the weight of five cubic feet is greater than two and a half hundred-weight, then two and a half hundred-weight to be rated a barrel bulk.

In weighing and measuring goods, for ascertaining the shore-dues payable, the weight or measurement of the packages is to be included.

TABLE of Tonnage, Anchorage and Beaconage Dues on Ships, to which the Act refers.

For all Vessels registered at the Port of Dundee, and navigated by masters who are Burgesses of Dundee:

	£.	s.	d.
To or from India or China, per register ton	–	2	6
To or from the West Indies, Azores, Madeira, Teneriffe, Cape de Verd Islands, or Greenland and Davis's Straits Fisheries, per ditto	–	–	8
To or from America, the Mediterranean, or any port to the north of Drontheim, in Norway, per ditto	–	–	6
To or from any port between Gibraltar and Dunkirk, including Dunkirk; and from any port in the Baltic, per ditto	–	–	4
To or from any port in Britain south of Flamborough Head, or to the westward of the Orkneys; or from the Islands of Ireland, Shetland or Orkney, per ditto	–	–	2 ½
To or from any port in Britain north of Flamborough Head, upon the East Coast, p' ditto	–	–	2
All vessels loaded with coals or lime, per ditto	–	–	1 ½
All vessels employed in the River Tay carrying goods, and entering the precincts of the port or harbour of Dundee, per ditto	–	–	1 ½

The tonnage-dues are chargeable on the voyage inwards or outwards, in the option of the Trustees. If the tonnage-dues on the voyage inwards have been paid, these must be deducted if the tonnage-dues on the voyage outwards be demanded.

It shall be in the option of the Trustees to charge either the tonnage-dues on the voyage inwards or on the voyage outwards, at the rates specified in the above Schedule, according to the distance; and if the charge be made on the voyage outwards there shall be deducted from it the amount of the dues that may have been previously paid on the voyage inwards; but if such vessels sail in ballast, they shall be charged with dues on the inward voyage only.

All vessels not registered at the port of Dundee, or although registered at the port of Dundee if navigated by masters who are not Burgesses of Dundee, shall, in addition to the dues specified in the above Schedule, be chargeable with farther dues equal to the difference which before the passing of the first recited Act existed between the dues then chargeable at the said Harbour, in virtue of the charters of the borough, upon vessels navigated by freemen and unfreemen respectively.

Vessels registered at the port of Dundee, if navigated by masters domiciled in Dundee, and free by service in His Majesty's navy or army, to pay the same dues as if navigated by Burgesses of Dundee.

All vessels leaving the Harbour of Dundee, or precincts thereof, having paid tonnage-dues on the voyage inwards, and taking on board goods at any other port or place in the River Tay, and returning to the harbour of Dundee, or precincts thereof, to complete their cargoes, shall not be liable in tonnage-dues for such returns.

All vessels launched at the port of Dundee to pay half tonnage-dues on the voyage outwards, according to the distance of the port to which such vessels sail, provided they take goods on board; but if they sail in ballast, no dues shall be charged.

All vessels with cargoes to be permitted to enter the harbour of Dundee, for safety or convenience, by payment of one-half of the tonnage dues; but if they shall take goods on board (stores for their own use excepted) or break bulk, they shall be liable in full tonnage dues.

All vessels remaining in harbour six months, to pay one-third more than the above dues, excepting vessels belonging to Dundee, employed in the whale fishery.

All vessels remaining in harbour for one year, to pay double the above dues.

All vessels remaining in harbour for a longer period than one year, to pay in proportion to the length of time they shall so remain.

Each vessel entering the harbour, and loading or unloading goods or ballast within the same, or performing both operations before leaving the harbour, to pay, in name of plank-money (whether a plank be used or not), as follows:—

	£.	s.	d.
Vessels amounting to, and not exceeding 20 tons	–	1	–
exceeding 20 tons, and not exceeding 50 tons	–	1	6
50 - - „ - - 100 - -	–	2	–
100 - - „ - - 150 - -	–	2	6
150 - - „ - - 200 - -	–	3	–
200 - - „ - - 250 - -	–	3	6
250 - - „ - - 300 - -	–	4	–
300 - - „ - - 350 - -	–	4	6
350 - - „ - - 400 - -	–	5	6
400 - - „ - - – - -	–	6	6

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All vessels loading or unloading goods in the precincts of the harbour of Dundee, shall be exempted from payment of plank-money.

All steam-vessels employed in the River Tay, in carrying passengers and their luggage exclusively, shall pay 1*s.* for each voyage, as tonnage-dues; but it shall be in the power of the Trustees to compound and agree with the proprietors of steam-vessels, for the tonnage-dues by the month or year.

It shall be in the power of the Trustees to compound and agree with the owners of vessels trading in the River Tay for tonnage-dues, by the month or year.

All vessels leaving the harbour, for the purpose of taking on board ballast, in any part of the River Tay, and returning to the said harbour or precincts thereof with ballast, shall not be liable in shore-dues for such return.

All vessels sailing from the port of Dundee, and put back by stress of weather, or any other cause, without having accomplished her voyage, shall not be liable in additional shore-dues for such return.

All vessels from any part of the River Tay, with stones, and having no other goods on board, and delivering their cargoes in the precincts of the said harbour, to pay 2*s.* each voyage, in name of tonnage-dues.

All vessels arriving in ballast, for the purpose of being repaired in the graving-dock, and departing in ballast, shall be exempted from shore-dues.

All vessels, and their cargoes of stones, wood and other materials whatsoever, brought into the harbour, or precincts thereof, for the use of the harbour works, ferry harbour works, or any of the public works of the town of Dundee, shall be exempted from shore-dues, and ferry-boats from tonnage, anchorage and beacon-dues.

DUNDEE HARBOUR.—ABSTRACT of the TREASURER'S ACCOUNTS, from 1st June 1831 to 31st May 1832, inclusive.

CHARGE:	£.	s.	d.	£.	s.	d.
Shore-dues on vessels and goods, collected				8,985	4	11
Shore-dues uncollected				398	8	10
				9,383	13	9
Graving-dock dues				417	14	–
Crane dues				62	2	–
Rents of property				688	19	6
				10,552	9	3
Borrowed from sundries (including the Town of Dundee, to pay compensation of 27,500*l.*)				35,754	3	–
			£.	46,306	12	3

DISCHARGE:	£.	s.	d.	£.	s.	d.
Wages to masons, labourers, &c.				3,323	7	10
Quarrying and hewing stones	£. 793	5	3			
Ditto - - ditto	49	11	6			
				842	16	9
Cartage of stones				572	15	7
Salaries—John Cairncross, treasurer	£. 40	–	–			
James Easson, superintendent, three quarters of a year	75	–	–			
Thomas Gray, berthingmaster, one year and a quarter	125	–	–			
William Wrongham, assistant berthingmaster	60	–	–			
James Saunders, clerk	100	–	–			
Four dock-gatemen	156	–	–			
				556	–	–
Implements—A building barge	£. 296	12	4			
A lime punt	236	18	–			
				533	10	4
Wood				527	18	8
Iron and smith work				498	8	9
Expense of collecting shore-dues—						
Simon Robertson, collector	£. 170	–	–			
James Nicoll, clerk	80	–	–			
David Barnet, clerk	70	–	–			
Andrew Watt, clerk	60	–	–			
Commission to shipping companies	64	18	11			
Incidental charges	18	12	–			
				463	10	11
Lime and sand				451	7	–
Warehouses, &c. on made-up ground				392	19	–
Rent to Town of Dundee				313	–	–
Carpenter work				173	12	1
Wright, slater, plumber, cooper and glazier work				158	1	1
Lighting the harbour				149	9	6
Graving-dock wages, &c.				122	18	5
Boots for men				95	8	9
Cordage				78	12	–
Tar, &c.				77	11	1
Iron crane				75	–	–

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DUNDEE HARBOUR.—ABSTRACT of Treasurer's Accounts—*continued.*

	£.	s.	d.	£.	s.	d.
Expense of submission with the Town, and action of declarator against them	74	13	7			
Road metal	56	9	–			
Rent of shore-dues office, &c.	55	–	–			
Oil and tallow	53	3	4			
Printing and advertising	49	5	1			
Coals for engine, &c.	47	9	–			
Stationery	26	12	11			
Painting	26	3	–			
Cement	23	19	3			
Corn and hay for horse	20	13	–			
Feu duties	8	7	7			
Assessed Taxes, subscription to Infirmary, police assessment, Town Clerk's dues, Auctioneer's and other small charges	90	11	1			
	9,938	14	7			
Interest on debt, including stamps on bonds and commission on money borrowed	2,792	11	11			
Shore dues uncollected	398	8	10			
Paid off Exchequer loan	£. 2,259	–	–			
Sundries	2,900	–	–			
Compensation to Town £. 27,500 – –						
For conveyances & stamps 517 16 11	28,017	16	11			
	33,176	16	11			
				46,306	12	3

GENERAL ABSTRACT of the AFFAIRS of the *Dundee* Harbour, from the commencement of the Operations in August 1815 to 31st May 1832.

INCOME:	£.	s.	d.	£.	s.	d.
Amount of shore-dues received at 31st May 1831	–	–	–	119,796	6	3
Add collected since that time	–	–	–	9,383	13	9
				129,180	–	–
Careening-beach dues	–	–	–	51	7	8
Graving-dock dues received at 31st May 1831	3,741	17	1			
Add collected since that time	417	14	–	4,159	11	1
Crane-dues received at 31st May 1831	152	15	7			
Add collected since	62	2	–	214	17	7
Rents of property received at 31st May 1831	492	6	6			
Add collected since	688	19	6	1,181	6	–
				134,787	2	4
Due to Dundee Bank on cash account	2,875	18	3			
Exchequer Loan Commissioners	7,494	–	–			
Sundries on bonds	66,723	–	–	77,092	18	3
Sinking fund, 31st May 1831	1,184	15	10			
Ditto 31st May 1832	1,231	10	5	2,416	6	3
			£.	214,296	6	10

EXPENDITURE:						
On building the harbour and docks	129,694	8	3			
Add expended this year	9,330	4	3	139,024	12	6
Amount of sinking fund	–	–	–	2,416	6	3
Implements	605	6	11			
Add implements this year	533	10	4			
	1,138	17	3			
Lochee engine	405	–	10			
Quarry at Lochee	1,845	15	7			
Dredging-machine	3,450	–	–			
Iron cranes	378	7	3	7,218	–	11
Amount of interest paid on debts	34,386	5	10			
Add interest this year	2,792	11	11	37,178	17	9
Compensation paid to the Town	27,500	–	–			
For stamps, conveyance, &c.	517	16	11	28,017	16	11
Shore-dues outstanding at 31st May 1832	–	–	–	398	8	10
Outstanding debt due by J. & J. Rutherford	–	–	–	42	3	8
			£.	214,296	6	10

(signed) *John Morton*, Trustee. *James Taws*, Trustee. *Adam, Symon* Trustee.
Geo. Kinloch, Trustee. *Alexander Kay*, Trustee. *Thomas Neish*, Jr. Trustee.
John Sturrock, Trustee. *Da^d Baxter*, Trustee. *David Hunter*, Trustee.
John Keay, Trustee.

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17 June 1835.

A COMPARATIVE STATEMENT of the Principal Articles of IMPORT at and of EXPORT from the Port of *Dundee* in Two Years, ending 31st May 1831 and 31st May 1832 respectively, with the Amount of SHORE DUES levied during these periods.

IMPORTS AND EXPORTS.	YEAR ending May 1831.	YEAR ending May 1832	Increase, 1832.	Decrease, 1832.
IMPORTS.				
Goods.				
Flax - - - - *tons*	14,607	10,907	- -	3,700
Flax Codilla - - - *ditto*	3,907	4,103	196	—
Hemp - - - - *ditto*	2,179	1,607	- -	572
Hemp Codilla - - *ditto*	1,566	1,475	- -	91
Lime - - - - *bolls*	50,972	42,604	- -	8,368
Coals, English - - *ditto*	125,426	131,621	6,195	—
Coals, Scots - - - *ditto*	150,005	168,015	18,010	—
Ashes - - - - *cwts.*	12,417	15,396	2,979	—
Timber - - - - *loads*	7,100	6,107	- -	993
Iron - - - - *tons*	1,395	1,417	22	—
Tallow - - - - *cwts.*	367	123	- -	244
Tar - - - - *barrels*	2,539	222	- -	2,317
Whale blubber - - *tuns*	126	750	624	—
Whale-bone - - - *cwts.*	114	725	611	—
Oats - - - - *qrs.*	8,351	4,804	- -	3,547
Barley - - - - *ditto*	2,022	4,605	2,583	—
Wheat - - - - *ditto*	18,898	10,525	- -	8,373
Pease - - - - *ditto*	1,038	875	- -	163
Rye - - - - *ditto*	3,114	- - -	- -	3,114
EXPORTS.				
Linens.				
Osnaburg - - - *pieces*	96,957	87,570	- -	9,387
Sheeting - - - *ditto*	131,660	143,250	11,590	—
Cotton Bagging - - *ditto*	65,592	49,036	- -	16,556
Sundries, ditto - - *ditto*	7,395	13,163	5,768	—
Sailcloth - - - *ditto*	74,268	85,522	11,254	—
Sacking - - - *ditto*	45,893	47,948	2,055	—
Dowlas - - - - *ditto*	40,915	68,448	27,533	—
Sundries - - - *ditto*	11,550	9,601	- -	1,949
	474,230	504,538	30,308	—
Grain.				
Wheat - - - - *qrs.*	2,958	2,729	- -	229
Barley - - - - *ditto*	23,378	34,024	10,646	—
Oats - - - - *ditto*	8,135	782	- -	7,353
Pease - - - - *ditto*	169	262	93	—
Flour - - - - *sacks*	132	699	567	—

SHORE-DUES.				
IMPORTS.	£. s. d.	£. s. d.		£. s. d.
Tonnage and Plankage - -	3,128 2 10½	2,870 15 3	- -	257 7 7½
Flax and Hemp - - - -	1,534 8 6½	1,132 4 5	- -	402 4 1½
Coals and Lime - - - -	945 19 10	874 17 4	- -	71 2 6
Miscellaneous - - - -	2,593 3 9	2,258 17 7	- -	334 6 2
£.	8,201 15 -	7,136 14 7	- -	1,065 - 5
SHORE-DUES.				
EXPORTS.				
Linens - - - - -	1,697 4 9	1,563 17 6	- -	133 7 3
Grain - - - - -	224 14 7	218 14 9½	- -	5 19 9½
Miscellaneous - - - -	467 18 8½	454 19 2	- -	12 19 6½
Amount on Exports - - -	2,389 18 -½	2,237 11 5½	- -	152 6 7
Amount on Imports - - -	8,201 15 -	7,136 14 7	- -	1,065 - 5
Total Shore-Dues for 1831 and 1832 - £.	10,591 13 -½	9,374 6 -½	- -	1,217 7 -

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A COMPARATIVE STATEMENT of the Number of Vessels and their Tonnage entered the Harbour of *Dundee* in Two Years, ending 31st May 1831 and 31st May 1832.

DESCRIPTION.	Tonnage, 1831.	Tonnage, 1832.	Increase, 1832.	Decrease, 1832.
Vessels from Foreign belonging to Dundee -	29,006	27,062	- -	1,944
Vessels from Foreign not belonging to ditto -	24,123	20,206	- -	3,917
Vessels from Coasting belonging to ditto - -	89,439	86,243	- -	3,196
Vessels from Coasting not belonging to ditto -	32,791	42,611	9,820	—
Vessels in the River Tay Trade - - -	13,967	15,362	1,395	—
Total Tonnage - - -	189,326	191,484	2,158	—
Number of Vessels entered the Harbour - -	2,495	2,624	129	—

AN ACCOUNT of the *Dundee* Harbour Revenue derived from the Shore-Dues, from the commencement of the Act for Improving the Harbour, July 4, 1815, to May 31, 1832.

PERIOD.	Amount collected by the Commissioners.	Expense of Collection. Collector and Clerk's salaries.	Incidental Charges.	Rate per cent.	Net Amount received under the collection.	Amount received while under Lease.	Sum exposed at unsuccessfully.	Scale by which the dues were levied, 100.	Amount they would have yielded at old Rates.	Saved to the Public by the reduction of Rates.	Gain of the Public by the collection.	Net Amount received under the collection and Leases.
	£.	£.	£.	£. s. d.	£.	£.	£.	£.	£.	£.	£.	£.
July 1815 to July 1816	4,411	315	No Acct found.	7 2 9	4,096	- -	- -	75	- -	- -	- -	4,096
July 1816 to July 1817	5,908	350	- -	5 18 6	5,558	- -	- -	100	- -	- -	- -	5,558
July 1817 to May 1818	- -	- -	- -	- -	- -	5,021	- -	100	- -	- -	- -	5,021
May 1818 to May 1819	- -	- -	- -	- -	- -	5,605	- -	100	- -	- -	- -	5,605
May 1819 to May 1820	- -	- -	- -	- -	- -	5,605	- -	100	- -	- -	- -	5,605
May 1820 to May 1821	- -	- -	- -	- -	- -	5,910	- -	100	- -	- -	- -	5,910
May 1821 to May 1822	- -	- -	- -	- -	- -	5,910	- -	100	- -	- -	- -	5,910
May 1822 to May 1823	7,145	362	100	6 9 3	6,683	- -	- 6,250	87½	8,165	1,020	433	6,683
May 1823 to May 1824	8,379	383	115	5 18 10	7,881	- -	6,400	87½	9,576	1,197	1,481	7,881
May 1824 to May 1825	8,478	386	117	5 18 8	7,975	- -	6,700	75	9,689	1,211	1,275	7,975
May 1825 to May 1826	- -	- -	- -	- -	- -	8,055	- -	75	- -	- -	- -	8,055
May 1826 to May 1827	7,841	300	79	4 16 8	7,462	- -	8,000	75	8,961	1,120	- -	7,462
May 1827 to May 1828	9,622	300	86	4 – 3	9,236	- -	8,000	75	12,027	2,405	1,622	9,236
May 1828 to May 1829	10,134	315	90	3 19 11	9,729	- -	10,000	75	12,667	2,533	- -	9,729
May 1829 to May 1830	11,231	330	99	3 16 4	10,802	- -	10,000	75	14,039	2,808	802	10,802
May 1830 to May 1831 *	10,599	330	87	3 18 8	10,182	- -	11,000	100	- -	- -	- -	10,182
May 1831 to May 1832	9,386	380	83	4 14 7	8,923	- -	- -	80	10,409	1,023	- -	8,923
£.	93,134	3,751	856	- -	88,527	36,106	66,350	- -	85,533	13,317	5,613	124,633

N. B.—By order of the Trustees, the Shore-Dues were reduced 20 per cent. on the 14th November 1831, which to the end of May following saved to the Rate-payers 1,023*l.*, and, but for which reduction, the amount for the year ending May 1832 would have been 10,409*l.*, being 190*l.* less than the former year (as above).

* The perpetual Bill came into operation 17th June 1830, the rates under which were equalized, and in general reduced considerably below the former, in some instances even 25 per cent.

Dundee Harbour.—Abstract of the Treasurer's Accounts, from 1st June 1833 to 31st May 1834 inclusive.

CHARGE:			£. s. d.
Shore dues, &c. uncollected and in arrear at 31st May 1833 - - - -			353 9 1½
Amount of shore dues on vessels and goods this year - -	£. 9,903 13 3		
Graving dock dues - - - - - - - - -	370 4 7		
Crane dues - - - - - - - - - -	95 6 4		
Rents of property - - - - - - - - -	517 5 10		
Fines, &c. - - - - - - - - - -	17 14 8		
			10,904 4 8
Borrowed from sundries - - - - - - - -			20,600 – –
Balance on Bank account, at 31st May 1833 - - - -	£. 16,547 12 1		
Ditto - - - - - - 31st May 1834 - - - -	14,787 19 1		
			1,759 13 –
Sum of the charge - - - - - - - - -		£.	33,617 6 9½

(*continued.*)

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DUNDEE HARBOUR.—ABSTRACT of Treasurer's Account—*continued.*

DISCHARGE.				£.	s.	d.
Expense of the ordinary Repairs and management of the Harbour;—viz.						
Carpenter, cooper, glazier and saddler work, &c.	£.	159	7 9			
Causeway stones and road metal		38	3 8			
Lighting and watching		157	– 1			
Oil and candles		24	10 3			
Coals and freight		49	17 1			
Taxes, subscription to infirmary, police, cholera and poors' assessments, town clerk's dues, and auditor's fee		77	– 10			
Stationery		24	3 –			
				530	2	8
Salaries; John Cairncross, treasurer, a year	£.	50	– –			
Thomas Gray, berthingmaster, ditto		100	– –			
William Wrongham, assistant berthingmaster, ditto		60	– –			
Thomas Mathew ditto		80	– –			
James Saunders, clerk ditto		100	– –			
Dockgate and graving dockmen		240	17 –			
		630	17 –			
Collection of Shore Dues:						
Simon Robertson, collector	£.	170	– –			
James Nicoll, clerk		80	– –			
David Barnet, ditto		70	– –			
Andrew Watt, ditto		60	– –			
James Barland, ditto		25	– –			
Commission to Shipping Companies		65	4 –			
Stationery and desk		17	12 –			
Incidental charges		25	7 8			
		418	3 8			
Sum				1,049	–	8
Printing and advertising				16	14	11
Rents; Pack-house, shore dues, office, &c.				407	10	–
Sum				2,003	8	3
Expense of extending Harbour; viz.						
Wages to masons, labourers, &c.	£.	11,584	– 8			
Quarrying and hewing stones		4,914	4 2			
Cartage of stones, &c.		1,610	18 4			
Wood		1,351	16 9			
Iron and smith work		467	14 9			
Lime, sand and cement		1,380	17 10			
Boots for men		199	– 6			
Cordage		229	18 2			
Tar		73	2 6			
Excavating Earl Grey's Dock		225	– –			
Repairing implements		301	10 7			
Carpenter work		158	16 –			
Ironmongery		134	4 3			
Pumps		75	– –			
Building engine-house		42	15 –			
Repairing Ward Road (one-half)		40	– –			
Coals and freight		110	6 1			
Oil and tallow		59	10 11			
Engineer's charges for trouble, plans, &c.		161	3 2			
Oakum, linen, salvage, oars, leather, straw, grass, bricks, &c. less 4*l.* 6*s.* 6*d.* received for old ropes		136	3 6			
Allowance to workmen, 31st December 1833		38	10 –			
Printing and advertising		16	14 11			
Salaries; James Leslie, resident engineer, a year		300	– –			
Expense of loans		198	17 11			
Incidents		96	17 7			
				23,907	3	7
Sum				25,910	11	10
Implements; steam-engine, picks, &c.				466	9	10
Lochee Quarry, and expense of titles				964	10	6
Shore dues returned				5	18	11
Interest on debt; less received on the treasurer and collector's bank accounts				4,495	–	7
Paid off Exchequer loan	£.	1,515	– –			
And of debt		240	– –			
				1,755	–	–
Arrears of dues				19	15	6
Sum of the Discharge			£.	33,617	6	9½
Charge as before equal to ditto				33,617	6	9½

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John Mitchell, Esq.

17 June 1835.

GENERAL ABSTRACT of the Affairs of the Harbour of *Dundee*, from the commencement of the Operations in August 1815 to 31st May 1834.

INCOME:	£.	s.	d.	£.	s.	d.
Amount of shore dues at 31st May 1833				138,409	3	8
Add for this year				9,903	13	3
				148,312	16	11
Graving dock dues, at 31st May 1833	4,678	17	4			
Add for this year	370	4	7			
				5,049	1	11
Crane dues, at 31st May 1833	279	13	3			
Add for this year	95	6	4			
				374	19	7
Careening-beach dues				51	7	8
Rents of property, at 31st May 1833	1,648	14	1			
Add for this year	517	5	10			
				2,165	19	11
Fines, &c. at 31st May 1833	10	16	9			
Add for this year	17	14	8			
				28	11	5
Due to Exchequer Loan Commissioners	3,720	–	–			
Sundries on bonds	128,993	–	–			
				132,713	–	–
Sinking fund, at 31st May 1833	6,738	14	10			
Add for this year	3,675	17	–			
				10,414	11	10
TOTAL INCOME				299,110	9	3

EXPENDITURE:	£.	s.	d.	£.	s.	d.
On building the harbour and docks, at 31st May 1833	163,901	14	2½			
Add, expended this year	25,910	11	10			
				189,812	6	–½
Implements, at 31st May 1833	2,427	4	9			
Add, for this year	466	9	10			
				2,893	14	7
Quarry at Lochee, at 31st May 1833	1,845	15	7			
Add, for this year	964	10	6			
				2,810	6	1
Lochee engine				405	–	10
Dredging machine				3,450	–	–
Iron cranes				440	7	3
Interest paid on debts, at 31st May 1833	41,515	8	4			
Add for this year	4,495	–	7			
				46,010	8	11
Compensation to the Town, including expense of conveyances				28,017	16	11
Due by the bank, at 31st May 1834				14,787	19	1
Amount of sinking fund, at same date				10,414	11	10
Shore dues returned at ditto				5	18	11
Ditto, in arrear				19	15	1½
Outstanding debt due by J. & J. Rutherford				42	3	8
TOTAL EXPENDITURE				299,110	9	3

Edinburgh, 23d July 1834.

Wm. Ballingall, Auditor.

John Mitchell, Esq.

17 June 1835.

A COMPARATIVE STATEMENT of the principal Articles of IMPORT at, and of EXPORT from, the Port of *Dundee*, in Two Years ending 31st May 1833 and 31st May 1834 respectively; with the Amount of Shore Dues levied during these periods.

IMPORTS AND EXPORTS.	YEAR ending May 1833.	YEAR ending May 1834.	Increase, 1834.	Decrease, 1834.
IMPORTS.				
GOODS.				
Flax - - - - - *tons*	16,040	18,096	2,056	—
Flax Codilla - - - - *ditto*	2,737	4,868	2,131	—
Hemp - - - - - *ditto*	2,875	2,453	-	422
Hemp Codilla - - - *ditto*	505	748	243	—
Lime - - - - - *bolls*	50,939	47,479	-	3,460
Coals, English - - - *ditto*	139,194	137,646	-	1,548
Coals, Scots - - - - *ditto*	189,530	201,989	12,459	—
Ashes - - - - - *cwts.*	7,748	1,137	-	6,611
Timber - - - - - *loads*	7,307	6,889	-	418
Iron - - - - - *tons*	1,602	1,800	198	—
Tallow - - - - - *cwts.*	905	660	-	245
Tar - - - - - *barrels*	2,547	1,886	-	661
Whale Blubber - - - *tuns*	1,981	1,612	-	369
Whalebone - - - - *cwts.*	2,138	1,686	-	452
Wheat - - - - - *qrs.*	5,130	2,312	-	2,818
EXPORTS.				
LINENS.				
Osnaburg - - - - *pieces*	100,713	122,191	21,478	—
Sheeting - - - - *ditto*	148,377	164,730	16,353	—
Cotton Bagging - - - *ditto*	27,179	30,521	3,342	—
Sundry ditto - - - - *ditto*	16,793	13,357	-	3,436
Sailcloth - - - - *ditto*	81,754	106,677	24,923	—
Sacking - - - - - *ditto*	57,242	67,749	10,507	—
Dowlas - - - - - *ditto*	69,774	52,644	-	17,130
Sundries - - - - *ditto*	13,374	13,048	-	326
	515,206	570,917	55,711	—
GRAIN.				
Wheat - - - - - *qrs.*	750	101	-	649
Barley - - - - - *ditto*	42,626	34,767	-	7,859
Oats - - - - - *ditto*	734	4,502	3,768	—
Pease - - - - - *ditto*	609	692	83	—
Flour - - - - - *ditto*	200	75	-	125

SHORE-DUES. IMPORTS.	£. s. d.	£. s. d.	£. s. d.	
Tonnage and Plankage - - -	2,756 11 2½	2,929 7 –	172 15 9½	—
Flax and Hemp - - - - -	1,254 16 2½	1,452 18 1	198 1 10½	—
Coals and Lime - - - - -	876 – 3½	914 10 11½	38 10 8	—
Miscellaneous - - - - -	2,127 7 3½	2,268 6 5	140 19 1½	—
	7,014 15 –	7,565 2 5½	550 7 5½	—

SHORE-DUES. EXPORTS.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Linens - - - - - -	1,544 10 1	1,672 5 1½	127 15 –½	—
Grain - - - - - -	232 – 10	195 16 4½	- - -	36 4 5½
Miscellaneous - - - - -	414 19 6	470 9 4	55 9 10	—
Amount on Exports - - - -	2,191 10 5	2,338 10 10	147 – 5	—
Amount on Imports - - - -	7,014 15 –	7,565 2 5½	550 7 5½	—
TOTAL SHORE-DUES for 1833 and 1834 - - £.	9,206 5 5	9,903 13 3½	697 7 10½	—

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John Mitchell, Esq.

17 June 1835.

A COMPARATIVE STATEMENT of the Number of VESSELS and their TONNAGE entered the Harbour in 1833 and 1834.

DESCRIPTION.	Tonnage, 1833.	Tonnage 1834.	Increase, 1834.	Decrease, 1834.
Vessels from Foreign belonging to Dundee -	24,914	27,487	2,573	—
Vessels from Foreign not belonging to ditto -	22,234	24,928	2,694	—
Vessels from Coasting belonging to ditto -	92,570	98,130	5,560	—
Vessels from Coasting not belonging to ditto	53,489	51,258	- -	2,231
Vessels in the River Tay Trade - - -	18,818	18,965	147	—
Total Tonnage - - - - -	212,025	220,768	8,743	—
Number of Vessels entered the Harbour	3,018	3,047	29	—

Shore-Dues Office, Dundee, June 24, 1834. *S. Robertson*, Collector.

A COMPARATIVE STATEMENT of the TONNAGE of SHIPPING belonging to the Port of *Leith*, from 1744 to 1835.

Years.	Tonnage.
1744 - - - - - - - - -	2,285
1752 - - - - - - - - -	5,703
1787 - - - - - - - - -	14,150
1792 - - - - - - - - -	18,468
1802 - - - - - - - - -	18,241
1808 - - - - - - - - -	20,022
1826 - - - - - - - - -	25,674
1835 - - - - - - - - -	22,073

Decrease between 1826 and 1835, 3,601 Tons.

London, 17 June 1835. *J. Mitchell.*

[Adjourned *sine die*.]

APPENDIX.

LIST OF APPENDIX.

No.
1.—Report on the Harbour and Docks of Leith, and the projected New Harbours and Docks in its Vicinity, by William Cubitt, Esq. Civil Engineer; with an Appendix, and Plans of the present Harbour and Docks, and the proposed New Western Harbour - - - p. 175
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3.—Report by John Rennie, Esq. on the Improvement of the Old Harbour of Leith - - p. 189
4.—Report on the present State of Leith Harbour, and the Practicability of rendering available its Wet Docks, by means of a Deep-water Entrance at Newhaven, and a communicating Dock or Ship Canal, by James Anderson, Esq. Civil Engineer; with Plan and Estimate - p. 192
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6.—Abstract View of the Revenue and Expenditure of the Corporation of the City of Edinburgh, for 10 Months, from 13 November 1833 to 13 September 1834, with General Statements of its Debts, Property, Revenues, &c. - - - - - - - - - - - p. 214
7.—Report of Captain George Thomas, R. N., Admiralty Surveyor, who was engaged in making an Official Survey and Admiralty Chart of the Frith of Forth for nearly Four Years, regarding the projected Harbour, Dock and Low Water Piers at Trinity—being Answers to Questions by Francis Beaufort, Esq. Hydrographer of the Admiralty - - - - - p. 229
8.—Report of Thomas Telford, Esq. on Frith of Forth Ferries, to the Commissioners of Woods and Forests, dated 12 April 1834; with Extract from the Minute of the Board to the Treasury - - - - - - - - - - - - - - - - p. 230
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12.—Extracts from a Report made by the late John Rennie, Esq. about the year 1800 (*see* Appendix 2, in No. 1, p. 180.)
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LIST OF PLANS.

1.—Survey of the Depth of Water along the line of Coast from Leith Martello Tower to Granton, with the Low-water Mark, by James Thomas, R. N.
2.—Map of Leith Harbour, reduced from Collings's Coasting Pilot, 1681.
3.—Plan of Leith Harbour and Docks, reduced from Dall and Heelin's Survey, 1831. foolscap, No. 2.
4.—Plan of Leith Harbour and Docks, showing proposed Harbour and Docks at Trinity.
5.—Plan of Leith Harbour and Docks, showing the proposed Harbour and Docks at Granton.
6.—Plan of Leith Harbour and Docks, showing the Deep Water at Newhaven, and a Floating Low-water Harbour connected with the present Harbour and Docks, as suggested in the accompanying Report.
7.—Enlarged Plan of Western Harbour, as connected with Docks.
8.—Plan of Leith Harbour, with the various Plans proposed for New Works referred to in Mr. Walker's Report, 1835.
9.—Plan of Leith Harbour, showing the Improvements proposed to be made therein by extending the present old Entrance to the Martello Tower, also extending it and a Ship Canal and Entrance Harbour to Newhaven, by John Rennie, 1827.
10.—Plan of Leith Harbour and Docks, exhibiting the Deep-water Entrance at Newhaven, with the Wet Dock or Ship Canals communicating with the Western Wet Dock, by James Anderson, Civil Engineer, 1834.
11.—Plan of the Intended Harbour, Dock, Piers and other Works connected therewith, at Trinity, near Edinburgh, by Grainger and Miller, Civil Engineers, 1834.
12.—Chart of the East Coast of the Firth of Forth, between Hound Point and Portobello, showing the relative position of the proposed Harbour at Trinity.

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Appendix, No. 1.

Report of *W. Cubitt*, Esq.

Plans 2 to 7.

Appendix, No. 1.

REPORT on the HARBOUR and DOCKS of *Leith*, and the projected NEW HARBOURS and DOCKS in its vicinity, by *William Cubitt*, Esq. Civil Engineer; with an Appendix, and Plans of the present Harbour and Docks, and the proposed New Western Harbour.

Sir, 16, Parliament-street, 11 Sept. 1834.

IN obedience to instructions with which I was provided on the 2d ultimo, I proceeded to Leith on the 6th, for the purposes therein stated, and returned again to London on the 28th, since which time I have been engaged in preparing my Report on the following subjects, entrusted to my consideration; viz. as to the present state of the Harbour, Docks, and Piers at Leith, and the facilities for reaching them; as to the best method of obtaining the deepest water for ingress and egress, whether by means of improving the present, or making another entrance, and the comparative advantages and expense of each of these methods; and to state the probable effects which the erection of new Docks or Harbours at Granton or Trinity may produce, if projected beyond high-water line; together with any suggestions that may present themselves for making the present Docks at Leith available for all the purposes contemplated by their erection, or the present wants of the port and neighbourhood.

In prosecuting this business, I not only examined the Harbour, Docks, and Piers, with regard to depth of water, past and present facility of entrance, &c. as regards the engineering part of the concern, but took occasion to see and hear all the plans and propositions of various persons and parties interested in different ways upon the question, as well as to read the reports and opinions of many persons, engineers and others, touching the subject, a list of which I transmit in the Appendix to the Report.

For facilities as to acquiring information, plans, and documents of various kinds, my acknowledgments are due to the Lord Provost, Bailies, Town Clerk, Chamberlain, and Surveyor of Edinburgh, for access to many original surveys and plans of the Harbour and Docks of Leith, as also to the Clerk of the Leith Dock Commissioners, the Collector of the Shore Dues, and the Superintendent of the Harbour and Docks, for documents and information in their respective offices, which were tendered and communicated with the greatest readiness.

From the Admiralty Dock Commissioners (Captain Macvicar and Lieutenant Wentworth) I received much information as to the Harbour, Docks, and Government property; and Messrs. Crichton, Duncan, Philip, and other gentlemen of Leith, as Dock Commissioners and merchants; and Messrs. Miller and Thomson, of the Town Council of Leith, furnished me with many facts and observations as to the state, prospects, and wants of the port.

As regards Granton Harbour, besides my own observations, I was supplied with plans on a large scale by Messrs. Gibson and Stevenson, the agent and engineer to the Duke of Buccleuch, as well as with information of a nautical kind relating thereto by Admiral Sir David Milne and others. My attention was called to the Trinity Harbour scheme by Mr. Scott of Trinity, with his engineers on the spot, and subsequent plans and notes at great length.

The manager of the London and Edinburgh steam-vessels (Mr. Hamilton), and Captain Bain of the Monarch steam-ship, pointed out very strongly the necessity of better accommodation to the increased and still increasing steam trade to the capital of Scotland. I also took a view of the ferry stations on both sides of the Frith, in order to form a judgment as to how far any one plan for harbour accommodation might be made to combine the interests of all parties with the least possible detriment to any. Having by my own observations, aided by the above-stated means of information from parties in various and opposite interests, and the assistance of the plans and documents named in the Appendix, endeavoured to make myself master of the subject, I now beg leave to submit to your notice, for the information of the Lords Commissioners of the Admiralty, the following Report thereon.

I have the honour, &c.

Captain Elliot, R.N., Admiralty. (signed) *W. Cubitt.*

REPORT.

THE harbour of Leith is a tidal harbour, situated at the junction of the Leith water with the Frith of Forth. It was formerly encumbered with a bar at its mouth, and quite dry at low water, and is now very nearly so, but, owing to recent improvements, has a much better entrance of late.

A plan of this harbour, as it is represented to have existed about the year 1680, upwards of 150 years ago, is given in the Sketch, No. 1* (reduced from "Collings's Coasting Pilot"), and is curious as showing how little the form and extent of the low-water line is changed from that time to the present, as will be seen by comparing it with the Sketch, No. 2,* reduced from a most excellent modern survey by Dale and Leslie, in 1831.

* These Plans will be found in Mr. Sinclair's office, City Chambers, Edinburgh.

Appendix, No. 1.

Report of *W. Cubitt*, Esq.

The water of Leith having formerly to make its way to the sea across the flat shore, dry at low water, called Leith Sands, the channel was subject to much fluctuation, according to the different direction of the wind and set of the tides, and the entrance of the harbour rendered both difficult and dangerous; to obviate which, in some measure, a pier of stone was erected a century back, about 100 yards long, in advance of the old wooden pier. This, in some degree, remedied the evil, but still left the entrance encumbered with a bar, shifting and unsafe.

From that time till about the year 1800 various surveys and reports were made, and plans proposed for the amelioration and improvement of the harbour, when the late Mr. Rennie had his attention called to the subject, and made a report on the construction of docks and the improvement of the harbour; an extract only from which, relative to the state of the harbour, and the means of improving it, have I been able to obtain; but so accurate is the description therein given of the causes and effects relative to the entrance and the bar, and so perfectly have the statements and recommendations therein contained been borne out by subsequent surveys and recent experience, that I am induced to give the extract at full length in the Appendix (No. 2). The principal argument was, that no permanent and uniform depth of water would be obtained, and a shifting bar avoided, but by carrying a pier or weir on the east side of the channel quite across the sands to, or into low water, by which means three, or possibly four feet of additional water might be obtained; and that this effect has taken place in a proportion to the extent to which the works have been carried, my inquiries and observations tended to prove.

After Mr. Rennie's report, little or nothing was done with regard to the piers or entrance, but the present wet docks, warehouses, and graving docks were constructed, and other works performed, the cost of which, combined with other circumstances, precluded any further works during the life of Mr. Rennie.

In the year 1824, the public attention was again called to the subject of the improvement of Leith Harbour, and the late Mr. W. Chapman of Newcastle, made a report thereon, with plans for the extension of the east pier, and the construction of a west pier or breakwater to quiet the harbour, and form an outer harbour. Subsequently much correspondence passed on the subject of a naval and store-yard for the Government; the result of all which was that the eastern pier was extended about 1,500 feet, on Mr. Chapman's general plan, a western pier and breakwater erected, and a portion of the western end of the western dock set apart as a store-yard for the naval service, the Government foregoing certain claims, to enable the city of Edinburgh to raise the necessary loan to complete the pier, which, with sums formerly advanced by the Treasury for the construction of the docks, paying off bonds, &c. made in the whole 265,000 *l.*, for the repayment of which, as I understand, the harbour and dock revenues are secured to the Government, relative to which I have inserted one year's dock accounts in the Appendix (No. 3), as taken from the abstract statement of the affairs of the city of Edinburgh, in the year ending on Whitsunday 1833.

Since the completion of the wet docks, the introduction of steam navigation, and its gradual extension and improvement, have made an entire change in the wants and uses of Leith as a harbour, and rendered necessary those kinds of accommodation which, 20 or 30 years back, from not being wanted, were not provided for; for instance, Leith Docks, which are available for all classes of sailing vessels which can enter the harbour, cannot, for want of a sufficiently wide entrance, be made use of by steamers. Steam-vessels, therefore, which carry goods in any quantity, and requiring to discharge at a wharf, must enter the harbour, and take the ground every tide (which for such vessels is very objectionable), as is the case with the Royal William and Royal Adelaide steam-ships, belonging to Messrs. Crichton & Co. of Leith, or must lie at anchor in the Frith, and load and unload their goods and passengers by means of boats in all weathers, which is at times both difficult and dangerous, and at all times disagreeable and expensive, but which is the plan pursued by the London and Edinburgh Steam Company, with their vessels the Monarch, Soho, and James Watt, which are not permitted to take the ground.

In order to facilitate the shipping and landing of passengers by the Fife and Mid Lothian Ferries, the numbers of whom very much increased with the introduction of steam-vessels, a stone pier was erected at Newhaven by an arrangement between the Ferry Trustees and the Government, and of which the London and Edinburgh Steam Company avail themselves for their use; but this is a very partial advantage, as the end of the pier being nearly dry at low water, the steam-vessels can rarely avail themselves of its use for lying alongside the pier to take in or discharge, consequently the whole of this great and important business has in effect to be transacted by those boats.

In order to facilitate also the great and increasing communication by steam to various places in the Frith of Forth, a chain pier has subsequently been erected about 500 yards to the westward of Newhaven Pier, which extends to five or six feet depth of water at low water, and serves for the use of the packet-boats to Stirling, Queensferry, and various other places on the Frith, both above and below Leith; but this accommodation is very far short of what is required for the purposes of a good steam-packet accommodation.

The present form of Leith Harbour and the relative situation of the above-described landing piers, are shown in the Sketch, No. 2*, and also more at large in the printed map of Leith Harbour, by Messrs. Dale and Leslie, the accuracy of which I had many opportunities of proving.

The

* This Plan will be found in Mr. Sinclair's office, City Chambers, Edinburgh.

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Appendix, No. 1.

Report of *W. Cubitt*, Esq.

The above is a general description of the state of the harbour, and the propriety of shipping accommodation at and in the accounts of the port of Leith up to the present time, which, it is agreed on all hands, is far short of what is wanted; but no two parties agree in the propriety of what has been done, or what is proper to do, to remedy existing evils, on both which subjects the evidence and accounts of persons on the spot are of the most conflicting kind possible. I shall therefore briefly describe the works that have recently been done for the improvement of Leith Harbour, and their effects; and then state some of the principal projects which have been put forth for improving Leith Harbour and Docks, and for making new harbours in the vicinity.

The works last executed are an extension of the eastern pier 1,500 feet towards the Martello Tower, and the erection of a breakwater to the westward, making an outer harbour of a triangular form, as shown in the plans; and in general executed agreeably to the report and plans of Mr. Chapman.

That this pier has produced a good effect I have no doubt; but whether the advantages obtained be equal to the cost (28,000*l.*) is by some disputed. From the best evidence I could obtain, and my own observations whilst on the spot, it appears to me that, by means of the new pier and subsequent dredging, &c., an additional depth of 2½ feet * is obtained in the entrance to the harbour between the Martello Tower and the dock entrance; and I have no doubt that if a low-water rubble-stone weir were continued from the end of the present pier round to the Martello Tower, and the gaps between the Tower and Beacon Rocks filled up in the same way as recommended by Mr. Dall, R. N., the present able and skilful superintendent, so as to prevent the first third of the flood, and the last third of the ebb from setting across the fairway of the entrance within and about the Martello Tower, that a still greater depth would be obtained, and would be maintained, and the formation of a bar prevented, as by that means the strength of both the flood and ebb tides would be so much augmented outside the Black Rocks and the Martello Tower, that no deposit would lie; and this, which is a very easy and economical thing to do, ought, in my opinion, to be done, and a few warping buoys and dolphins put down, let what will take place with regard to the formation of other harbours or low-water piers to the westward, and still the more even on those accounts if such should take place.

By stating that a greater depth of entrance may be obtained, and the formation of a bar prevented, I do not infer that Leith can be made a low-water harbour, (for that it never was nor ever can be with its present entrance,) but simply that a channel or fairway of entrance can be had, the bottom of which shall in all parts be at least two feet below the dock sill, and which formerly, before the erection of the pier, was at times more than two feet above it. At the time I was there, all parts of the entrance channel bottom were one foot lower than the dock sill.

Whatever may be done in the way of additional accommodation for steamers and large trading vessels, at or in the neighbourhood of Leith, there can be no doubt but that the great bulk of the shipping trade would continue to be carried on in the present harbour, and by the present entrance, especially when it is considered that the merchants themselves, their offices, warehouses, quays, and all other requisite accommodations are there fixed, and that the trade of the port is done by means of vessels, the average of the whole of which is under 80 tons; I believe nine-tenths of the whole under 100 tons; and that for vessels of any tonnage, with a draught of water within 11 to 16½ feet, the docks are available at all times, according to the height of the tide, which, in very low ebbs, flows 11 feet 3 inches above the dock sill, and in average spring-tides 16 feet 9 inches upon it. Still it is asserted that were there a harbour at Leith capable of receiving and floating at low water vessels of 12 feet draught of water, and accommodating steamers, much more and a different kind of trade would be induced to the port, which is now kept away solely by the alleged insufficiency of the harbour and docks.

With a view to obviate these difficulties, two plans have been recently brought before the public, one for a new harbour, or rather a set of docks, at Trinity, about 500 yards west of Newhaven Pier, as proposed by Alexander Scott, esq. and others, forming a joint stock company, and designed by Messrs. Grainger and Miller of Edinburgh, civil engineers (*see* annexed Sketch, No. 3†); and the other at Granton, about one mile westward of the first, upon the estate of his Grace the Duke of Buccleuch, for a harbour and docks, with railway accommodation to Edinburgh and Leith, designed by Messrs. Robert and Allan Stevenson, civil engineers, (*see* annexed Sketch, No. 4,† reduced from Messrs. Stevenson's plans.)

Now, without going into the merits of either of these plans, as plans, except so far as their being projected into the tideway beyond low-water mark may affect the present harbour and docks of Leith, and which, I am of opinion, would be very little, if at all, injuriously affected thereby, the question naturally arises as to whether the establishment of the Trinity Docks, or the Granton Harbour and Docks, will benefit either the public or the parties interested in their construction, in such a degree as to warrant their adoption of either plan, taking into consideration the effect that must be produced upon the existing establishments, trade and income of Leith Harbour and Docks, if any part of the business were withdrawn into new and distinct channels.

Provided there were no harbour and docks at Leith, and if it were required, under all the existing circumstances of improved intercourse between Edinburgh and London and all other places, to construct a harbour that should best answer every purpose, present and prospective,

* If the 0 of the Old Pier Gauge ever denoted the bar or bottom of the entrance at any one place, an additional depth of three feet nine inches has been obtained.

† These Plans will be found in Mr. Sinclair's office, City Chambers, Edinburgh.

tive, it would most probably be effected by enclosing a large piece of water with rubble-stone piers, (as is done at Kingstown near Dublin,) in some situation between Cramond Island and Leith, where the water was clearest and deepest nearest in shore, at the head of which docks, warehouses and wharfs might be erected, and roads of communication formed with the capital and other places. Now, to cover the expense, and carry on an undertaking of this kind, would require at least the whole of the revenues at present derived from Leith Harbour and Docks at the recent high rate of charges on shipping, &c., supposing that such new establishments would cost about 400,000*l.*, and allowing 2,000*l.* per annum only to keep them in repair, as is the case at Leith.

Of the two proposed new works, Trinity Docks is estimated at 250,000*l.*, and Granton Harbour at 268,000*l.*, but as neither of these sums includes warehouses, approaches, roads, railways, &c., which must of necessity form parts of establishments to be used for actual business, the sum of 300,000*l.* is as little as can be taken, even on the estimates of the projectors themselves; and if the rates and dues on shipping and goods be so much too high at Leith, which is one of the arguments stated for wanting a new harbour, a reduction of 25 per cent. only would make it require more than all the present trade at Leith to pay simple interest on either of the proposed plans; so that I think it must follow, if any person lay out money sufficient to make anything of an available and useful harbour either at Trinity or Granton, the money would be all or nearly all sunk as regarded themselves, the interest of the present harbour and docks injured, and the public in general very little if any benefited.

Still it cannot be denied that the shipping accommodations at Leith, as before observed, are insufficient for present purposes, and that low-water floating accommodations for the large steamers, and the larger class of trading or foreign vessels, up to 500 tons burthen at least, is very much needed, and ought to be had. The accommodation also for the roads from Mid Lothian into Fife, and the north of Scotland, are also very deficient on both sides of the water, as regards the ferries, which, although small vessels, are obliged to embark and disembark their numerous passengers at low water by means of the ferry boats; and as regards the general steam packets up and down the Frith of Forth, the chain pier affords but a very insufficient accommodation in dark and blowy weather.

Having thus described the present state of the harbour, piers and docks at Leith, and the proposed new works at Trinity and Granton, with their probable effects, it now becomes my duty to attend to that part of my instructions which relates to the suggestion of means for the improvement of the harbour and docks, which shall afford the greatest possible accommodation to all parties, with the least possible injury to any existing establishments.

After a very careful examination of the subject, I am of opinion that every requisite object may be obtained without rendering useless anything which has previously been done for the improvement of Leith Harbour, with manifest improvement to the present docks, and that low-water floating accommodations may be obtained in a safe and secure harbour, for all the steam-vessels that come to the port, with a capability of embarking and disembarking their passengers and goods at a wharf alongside the public road, and be able to get to and from sea at all times of tide; and this at a very small expense, compared with the objects to be obtained, and without any additional docks, ship canal or lock work, save and except an entrance gate or lock at the western end of the present docks, as a communication with them.

To explain this, it will be necessary to refer to the sketches, Nos. 5 and 6, hereto annexed. No. 5 shows the plan on a small scale as connected with the harbour and docks; and No. 6 the new low-water harbour on a larger scale.

The project is simply this: To include all the space between the western dock and Newhaven Pier with dry rubble-stone breakwaters or piers, as shown in the plans, with an entrance between them at a depth of 12 feet low-water spring-tides, and within the space thus included to excavate and dredge out a channel from 12 to 15 feet deep below low water, and of sufficient width for the largest steam-vessels to turn or pass in. By this simple means will a harbour be formed, in which accommodations may be made for all the ferry packets and London trade, in the most economical manner possible, and which I suppose might be arranged somewhat in the manner following; viz. Newhaven Pier would answer all the original intended purpose, with the great additional advantage of having the steam ferries go alongside at all times of tide, perfectly sheltered in all weathers. A projecting pier (A) across the channel, at which two Frith of Forth steamers might lie at each side, and one across the end would serve for all the general and short steam traffic. About 300 feet further east, a wharf (B) 300 feet long, at which two large steam-boats would lie alongside, would serve for the London and Edinburgh Steam Company; and further up towards the docks might be one or more similar wharfs (C) for the use of the Leith and London steamers, or for large vessels, English or foreign, which might not enter the docks, or preparatory to entering the docks or sailing. At the upper end of the deep water-channel I propose an entrance lock 60 feet wide, communicating with the western dock, getting access to the graving docks, and completing an entire communication with the present Leith Harbour, as will be seen in the Sketch No. 6. A plan of this kind would not only supply the desideratum of a low-water harbour for steam-vessels and foreign vessels of a greater burden than can at present enter Leith Harbour, but would also render the present docks available for the same, and also for all classes of His Majesty's vessels that could lie afloat in the docks, viz. from 16 to 17 feet draught of water; besides which, the Government property at Annfield, and at the western end of the docks, would become available for immediate use whenever circumstances might require it, as both would be made accessible at all time of tides from a quiet harbour. My estimate of the probable expense of carrying this work

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work into effect is 125,000 *l.*, according to the detailed statement in the Appendix, No. 5, but even if it were to cost 150,000 *l.*, I should deem its advantages cheaply purchased, compared with spending double the sum of money in the construction of new harbours, distinct from all present conveniences and works, which could only tend to the ruin of Leith Harbour and Docks; whereas, by making a deep-water entrance connected therewith, the harbour and docks of Leith would be improved, the Government property and securities rendered more available and valuable, the road ferries and steam-packet trade generally supplied with a good harbour and landing stations, all possible interests combined, and the city of Edinburgh furnished with a port suitable to all its wants, and commensurate with its increased and increasing magnitude and importance.

(signed) *W. Cubitt.*

(Appendix, No. 1.)—LIST of PLANS, REPORTS and PAPERS, examined and referred to in making the Inquiry for the foregoing Report.

1. Mr. Chapman's Report and Plan for the Improvement of Leith Harbour, 1824.
2. Report of the Committee of the Inhabitants of Leith in relation to the merits of Mr. John Rennie's and Mr. Chapman's Plans.
3. Plan and Sketch of a proposed Low-Water Pier and Floating Basin for Steam-Vessels at Newhaven, and a communicating Ship Canal to Leith Wet Docks, by James Anderson, April 1834.
4. Plan of Ground between Wardie and Newhaven, with a projected Low-Water Pier, and Wet Docks at Trinity, by James Anderson, 1833.
5. Prospectus and Plan of Trinity Harbour and Docks, 1834.
6. Petition of Inhabitants of Edinburgh for a Low-Water Harbour and Docks at Trinity, on the lands of Alexander Scott, Esq.
7. Mr. Telford's Report on Trinity Harbour and the Ferry Stations, April 1834.
8. Questions and Answers to and by Mr. G. Thomas, Master, R.N., relative to the Trinity Harbour, April 1834.
9. Reports of Messrs. Grainger, Miller and Gibb, Civil Engineers, as to the formation of a Harbour at Trinity, made February 1834.
10. Mr. Thomas's Survey of the Frith of Forth in 1815.
11. Plan and Chart of the Harbour and Docks at Leith, by Dall and Leslie, 1831.
12. Sir John Rennie's Report to Lord Melville, relative to a Western Entrance at Newhaven, with a Plan, dated 21st February 1827.
13. Sir John Rennie's Report to the Navy Board, on the extension of the present Pier at Leith, on Mr. Chapman's Plan, and a Correspondence thereon, 28th February 1827.
14. Reports of Sir John Rennie, Messrs. Taylor and Chapman, relative to the establishment of a Naval Yard or Station at the Western End of Leith Docks.
15. Extracts from Sir John Rennie's Report to the Navy Board as to the Construction and Expense of the Western Pier.
16. Correspondence of the Navy Board relative to the Western Pier.
17. Report and Plans of Messrs. Robert and Allan Stevenson, to the Duke of Buccleuch, for a New Harbour at Granton.

Note.—The above documents were received from the Admiralty, and all returned with this Report.

18. Report and Plans relative to enlarging the Harbour of Leith, with Plans, by Robert Whitworth, 1786.
19. Plan for Improving the Harbour and Town of South and North Leith, by R. Shirreff, 1787.
20. Correspondence and Papers relative to the Improvement of Leith Harbour in 1822, containing the Report of Baillies John Macfie, James Keoch and Abram Newton, and the following Documents:—

1. Plan of Leith Harbour and Docks, showing the line of proposed Pier.—2. Plan of New Pier, showing the peculiar construction of the work.—3. Letter of Mr. George Crichton to the Magistrates of Edinburgh, dated 7th September 1822.—4. Letter of Mr. George Crichton to the Magistrates of Leith, dated 16th September 1822.—5. Report of John Paterson, Esquire, Engineer, to the Magistrates of Edinburgh, 14th October 1812.—6. Report of Robert Stevenson, Esquire, Engineer, to the Magistrates of Edinburgh, 23d February 1818.—7. Report of John Rennie, Esquire, Engineer, to the Lord Provost of Edinburgh, 23d March 1818.—8. Report of James Walker, Esquire, Engineer, to the Magistrates of Leith, 25th October 1823.—9. Observations on the preceding Reports by Mr. George Crichton, addressed to the Magistrates of Leith.—10. Letter from James Duncan, Esquire, Leith, as to the difficulty of Chartering Ships for Leith.—11. Copy of a Charterparty, in which Leith is excluded under a penalty.—12. Letter from W. Allen, Esquire, on the same subject.—13. Returns of different Companies and Agents in Leith, showing the Number of Passengers, and Quantity of Luggage landed and shipped within the limits of the Port in 1821.

21. Agreement between the Lord Provost, Council and Magistrates of the City of Edinburgh, and the principal Officers and Commissioners of His Majesty's Navy, for laying out

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28,000 *l.* upon the Extension of the Eastern Pier at Leith, and Works connected therewith for the Improvement of Leith Harbour, dated 22d and 30th June 1826.

22. Plans for the Improvement of Leith Harbour by Mr. Matheson, Civil Engineer, 1829.

23. Letter to the Proprietors of Steam-Vessels connected with the Frith of Forth and others interested in the Trade carried on by Steam-Navigation, by Capt. J. D. Boswell, R. N., 1831. With an Appendix by Mr. Matheson, and Plans for a Harbour for Steam-Ships at Wardie.

24. Report to the Commissioners for the Superintendence and Management of the Harbour and Docks at Leith, relative to the accommodation of Steam-Vessels therein, by James Jardine, Esq. Civil Engineer, October 1831, with Three Appendixes.

25. Supplementary Report and Appendix, by the same, on the same subject.

26. Report to the Commissioners for Management of the Harbour and Docks of Leith, relative to Steam-Vessel Accommodation, by Capt. Samuel Brown, R. N., October 1831.

27. Reports of Messrs. Dall and Leslie on Harbour Accommodation for Steam Vessels, September 1831.

28. Report on the formation of a Basin in Leith Harbour for the reception of Steam-Vessels of every description, by W. Chapman, Civil Engineer, August 1831.

29. Report to the Leith Harbour and Dock Commissioners on the State and Condition of the Harbour of Leith, and the necessity for Steam Accommodation, by Capt. Boswell, R. N., 1831.

30. Letter to the Right Honourable the Lord Provost and Magistrates of the City of Edinburgh, relative to the Accommodation for Steam Vessels, by Capt. Boswell, R. N., 1832.

31. Minutes of Evidence of various Captains of Steamers, Masters of Vessels, Pilots, &c., before the Leith Dock Commissioners, in the months of April May and June 1832, relative to the State of the Entrance of Leith Harbour, the Accommodation for Steam-Vessels, &c.

32. Notes submitted for the consideration of Mr. Cubitt, as to the Construction of the proposed Harbour at Trinity, by Alexander Scott, Esq. of Trinity, with Plans of the Frith of Forth, and the proposed Harbour, Prospectuses, Estimates, &c.

33. Abstracts of the Acts of Parliament relating to the Harbour and Docks of Leith, from 1788 to 1826 inclusive.

Together with a variety of other Books, Plans, Pamphlets and Papers of a local kind, furnished by different individuals and parties relative to this subject.

(Appendix, No. 2.)—EXTRACTS from a REPORT made by the late *John Rennie*, Esq. about the year 1800.

THE harbour of Leith in its present state labours under many disadvantages, besides those peculiar to dry or tide harbours: it is much too small, and the water is too shallow for the present extensive and increasing trade; the vessels upon the breaking up of the ice frequently sustain great damage, and even some in heavy floods, which are frequent in this river.

The harbour of Leith has, in common with all river harbours, its bar, which appears by Mr. Ainslie's map to be about 200 yards distant from the point of the east pier, and which varies in distance and depth according to the quantity of water sent down by the river, the direction and extent of the winds, and height of the tide. The bar is formed at the place where the waters of the river and tide become equal in force to each other and create a stagnation, during which they deposit the silt they contain, and form a sand bank. Again,

The harbour of Leith is formed and kept open by the small river which passes through it to the sea, and, like all such harbours, is liable to considerable variation in depth, according to the wetness or dryness of the seasons; for when the season is wet, there being proportionally a great quantity of water in the river, it scours the bottom deeper, and has considerable influence in reducing the bar, and deepening the channel towards the tide streams of the Frith of Forth, and *vice versa*; but there is a certain point to which this depth can come and no farther, (unless an additional quantity can be brought into it.) This depth depends upon the tenacity of the clay or sand, area of the sections, and obstructions the water meets with from the shipping. In a river whose quantity of water is given, the depth will be nearly inversely as the width; this being admitted, we must look for accommodation elsewhere than in the channel of the water of Leith.

For these reasons it appears to me that the improvement of the present harbour should be confined to the making of good quay walls, cutting off projecting and inconvenient places, advancing them forward when the regular sweep requires, and digging the bed of the river and harbour to a uniform depth, which the toughness of the till prevents the river from doing, and scouring away the mud by loosening it in floods, and in general assisting the means which nature has afforded of putting and keeping in as good a state of repair as it will admit of. But further than this it ought not to be done for a dry harbour.

There is now 10 feet of water at good spring tides nearly as high as Leith Mills, and about 12 to 13 feet at the Old Bridge, and 18 inches or 2 feet more might be made and preserved; but this will, in a certain degree, depend on the depth to be made on the bar, about which I shall afterwards say something.

The sand banks commencing to the eastward of Newhaven, and continuing in that direction beyond the entrance of Leith Harbour, are varied and enlarged by the north and north-

east

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east winds, the former meeting the river and returning tide directly in the face, and the latter bringing sand from the eastward through the opening between the Beacon Rocks and the Black Rocks. Had this latter chain been continued, the bar or entrance would have been more sheltered, and of course it would have suffered less from that quarter. Nothing therefore very great in the way of deepening can be done; the best means of effecting this would be to extend the east pier seawards, but this would be attended with very great expense.

The idea that has been suggested of narrowing the mouth would, I apprehend, be attended with little benefit, for although it would certainly deepen the channel where the contraction is made, and pehaps a short way up the harbour, yet as soon as it gets beyond that mouth, it would be obstructed by the sea, as it now is, and although by continuing the backwater undivided to some further distance, yet it would only drive the bar a little further to seaward without materially increasing its depth. The fact is, the tide ebbs too far beyond the point of the pier; and it is useless to deepen the mouth of the harbour while between it and the sea is a shallow bar.

In a former part of the report, I have given it as my opinion, that unless the east pier is very much extended, no great additional depth of water can be obtained at the entrance of the harbour, which is also of much consequence to the trade of Leith. The expense of extending the pier would be very great; and when so done, I do not apprehend that more than three, or at most four feet, additional depth of water could be got. A question therefore arises, whether it would not be better to look out for another entrance with more depth of water, and where the depth could be maintained at a reasonable expense, than to be at the expense of lengthening the east pier.

(Appendix, No. 3.)—STATEMENT of PRODUCE of the *Leith Dock Estate* in the Year ending Whitsunday 1833, taken from the Abstract Statement of the Affairs of the City of *Edinburgh*, September 1833.

	£.	s.	d.
Dock dues received	6,693	19	11
Feu duties, rents of ship-yards, &c.	2,899	7	1½
Together £.	9,593	7	–½
Deduct expense of repairs, dredging, &c., by Commissioners, public burdens and charges of collection, for collector's account, subject to audit of Commissioners	2,552	16	4½
Net Produce £.	7,040	10	8

The Debts with which the Dock Revenue is at present burdened, consist of:

	£.	s.	d.
1. Bond to Barons of Exchequer, 4th December 1805, for	25,000	–	–
2. Ditto, ditto, 4th July 1827 £. 240,000 – –			
Of which there has been liquidated by sinking fund, established by Dock Acts of 1825 and 1826 19,007 5 –			
	220,992	15	–
Amount, with interest resting from 1st March 1833 £.	245,992	15	–

	£.	s.	d.
Interest on the above bonds for one year, at three per cent., the rate presently payable to Government, is	7,379	15	8
And taking the above sum of net receipts as the produce of the Dock revenue	7,040	10	8
There appears an annual deficiency for the payment of interest, of £.	339	5	–

But in terms of the arrangement with Government in 1826, there falls to be paid in annually, besides the interest, a sum to account of the sinking fund then established for the redemption of the principal, in the following manner:

	£.	s.	d.
1. Interest at three per cent. on bond of 25,000 *l.*	750	–	–
2. Four per cent. on 240,000 *l.*, the excess of which above three per cent. on the part thereof remaining due, is applied in payment and extinction of the principal	9,600	–	–
Together £.	10,350	–	–
Taking as the average the produce of the Dock revenue, as before	7,040	10	8
Remains as annual short-coming to be supplied £.	3,309	9	4

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Under the arrangements of 1826, however, the sums payable on account of the bonds of 240,000 *l.*, falls to be increased, in the year 1829, from four to five per cent., to be applied, in the manner already stated, in extinction of the principal. The four per cent is payable for 12 years, from the 5th July 1827, on account of the city having advanced 28,000 *l.* on the extension of the pier.

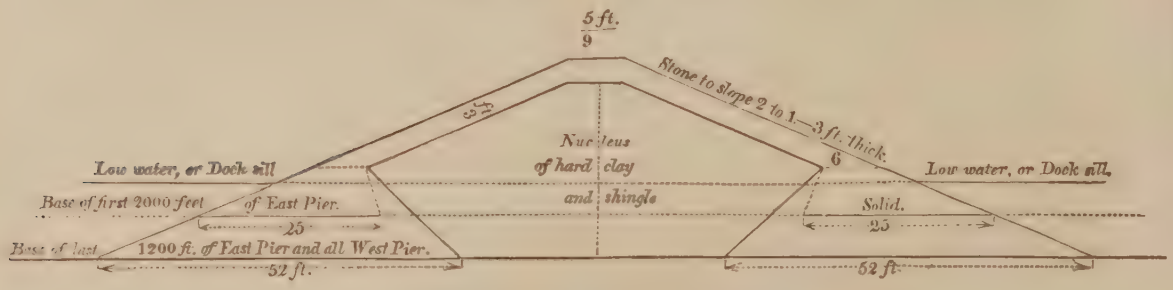
(Appendix, No. 4.)—STATEMENT of the Revenue of the Harbour and Docks of *Leith*, for Five Years, from 1829 to 1833, both inclusive: viz.

	1829.			1830.			1831.			1832.			1833.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Feus, rents, &c. - - -	2,656	8	1½	2,589	6	8½	2,983	8	3½	2,987	3	7½	2,927	15	2½
Dock dues on shipping - -	5,685	11	1½	7,072	6	11	7,208	15	7	6,662	1	6	6,691	8	6
Harbour dues on ditto - -	2,616	11	7½	2,433	18	–	2,541	2	1½	2,399	14	5½	2,413	1	1
Shore dues on goods - -	5,014	1	6	4,593	2	6	4,859	8	10	4,610	4	10½	4,633	18	8
Merk per ton on ditto - -	3,876	12	1½	3,616	2	7	3,797	3	6	3,414	18	6½	3,180	11	3
Pontage on ditto - - -	1,009	19	6½	1,242	9	8	1,285	2	11½	1,252	10	11	1,182	17	8
Prime gilt on ditto - - -	918	4	7½	812	14	3	938	1	6	845	6	5½	753	5	11½
£.	21,777	8	8	22,360	–	7½	23,613	2	9½	22,172	–	4½	21,782	18	4

Average of the five years, 22,341 *l.* 2 *s.* 2 *d.* Mr. Sandeman begs leave to present his compliments to Mr. Cubitt with the enclosed statement, according to his request, and hopes it will prove satisfactory.

Shore Dues Office, Leith, 11 August 1834.

Section of Breakwater.


5 ft. 9
Stone to slope 2 to 1—3 ft. thick.
6
Nucleus of hard clay and shingle
Low water, or Dock sill
Low water, or Dock sill
Base of first 2000 feet of East Pier.
Solid.
25
25
Base of last 1200 ft. of East Pier and all West Pier.
52 ft.
52 ft.

(Appendix, No. 5.)—DETAILED Estimate of Enclosing and Excavating a New Western Harbour at *Leith*.

Length of East Breakwater - - - - 3,200 feet.
Length of West Breakwater - - - - 1,200 –

Feet.	Feet.	Feet.	Cube Feet.	
2,000 ×	31 ×	7 =	434,000	of rubble in basis of east pier, first length.
2,000 ×	100 ×	3 =	600,000	- ditto - facing slopes and top.
1,200 ×	58 ×	13 =	904,800	- ditto - basis of east pier, outer length.
1,200 ×	100 ×	3 =	360,000	- ditto - facing of slopes to ditto.
Total - -			2,798,800*	- ditto - east breakwater.
904 × 800 × 360,000 =			1,264,800	- ditto - in west ditto.
Total - -			4,063,600	cube feet in both breakwaters.

Allowing 20 cube feet of rubble work to be one ton, the number of tons will be $\frac{4,063,600}{20}$ = 203,180 tons of stone.

	£.	s.	d.
203,180 tons of rubble stone, rough packed in basis and laid in slopes, at 4 *s.* - - - - - - - - - -	40,636	–	–
Add contingencies, 10 per cent. - - - - - -	4,063	–	–
Total of Breakwaters - - - £.	44,699	–	–

ESTIMATE

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* This total is cast wrong; the error pervades the whole estimate, and makes the total 5,000 *l.* too much.

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ESTIMATE of a CUT or DEEP-WATER CHANNEL, in Two Parts: viz.

	£.	s.	d.
1. Entrance channel, 1,500 feet long, 150 wide at the bottom, with slopes 3 to 1; 10 feet of stuff to be dredged out at one end, and 2 feet at the other;—56,880 cube yards, at 1*s.*	2,344	–	–
2. The main cut or harbour channel, 3,000 feet long, 200 feet wide at bottom, slopes 2 to 1 on the quay side, and 3 to 1 on the off side, excavated and dredged at an average 18 feet deep, so as to have 12 to 15 feet depth at low water, will contain 453,000 cube yards, which, at 1*s.* per yard -	22,650	–	–
£.	24,994	–	–
Add contingencies, 10 per cent. - - - - - - -	2,499	–	–
Total, Dredging and Excavation - - - £.	27,493	–	–

Note.—The clay and earth excavated and dredged is reckoned at such a price as will lay it in the nucleus of piers, or at the back of the land slopes, or deposit it wherever it be wanted.

ESTIMATE of forming a RUBBLE SLOPE on the Land Side, to form a Road in front of *Anchorfield* and *Annfield* to connect *Leith* with *Newhaven*, by the side of the Harbour.

	£.	s.	d.
Slope 3,000 feet long, 1½ to 1, 36 feet wide, and stoned 2 feet thick, will be 12,000 square yards area, which, at 5*s.* the square yard, for all labour and materials, is - - -	3,000	–	–
Add 10 per cent. for contingencies - - - - -	300	–	–
otal, Forming and Stoning Slope - - - £.	3,300	–	–

Road-making, &c.

	£.	s.	d.
Forming road along the shore, in front of Anchorfield and Annfield, and in front of new wharfs, &c., say 1,000 yards, at 20*s.*	1,000	–	–
Contingencies of compensation, fencing, &c. - - - -	1,000	–	–
Total, Roads, &c. - - - £.	2,000	–	–

Wharfs, &c.

	£.	s.	d.
Adding and securing Newhaven Pier, so as to land and ship at low water - - - - - - - - - -	1,000	–	–
One new wharf for Forth steamers.			
One new wharf for London steamers.			
One new wharf for other purposes.			
Each wharf to contain 10,000 feet of timber, coppered or scupper nailed in the water, driven, bolted, secured, complete in place, all labour and iron work included, at 6*s.* per foot, will be 3,000*l.* each wharf; or for the three - - - -	9,000	–	–
Total of Wharfs - - - £.	10,000	–	–

SUMMARY OF ESTIMATE.

	£.	s.	d.
1. Breakwater, as per details - - - - - -	44,699	–	–
2. Excavating and dredging, per details - - - -	27,493	–	–
3. Forming and stoning land slope - - - - -	3,300	–	–
4. Road making, &c. - - - - - - - -	2,000	–	–
5. Wharfs - - - - - - - - - -	10,000	–	–
6. Junction lock with docks - - - - - -	21,000	–	–
7. Dredging-machine implements and contingencies thereon	16,508	–	–
£.	125,000	–	–

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Plan 8.

Appendix, No. 2.

REPORT on the IMPROVEMENT of the Port of *Edinburgh*, by *James Walker*, F.R.S. L. & E., President of the Institution of Civil Engineers.

To Messrs. Gibson and Home, W. S., Agents to his Grace the Duke of Buccleuch, K.G., &c. &c. &c.

Gentlemen,

YOUR letter to me, dated 7th February last, informs me that the Duke of Buccleuch had recently had surveys and plans made by Messrs. Stevenson and Son for a low-water pier, and eventually for a harbour, at Granton, near Newhaven, and that being desirous in a matter of such consequence to have the advice of more than one engineer, his Grace had directed you to apply to me. I therefore proceeded to Edinburgh early in April, and in my first conference with you was informed that the Duke was desirous that my survey and report should not be confined to the consideration of the extent and method of forming works at Granton, but should embrace the more general question of the expediency of any works there at all, having reference to the general interests of the district, his Grace having no intention of undertaking a measure unless it could be shown to be consistent with those interests, and being of opinion that the public and his private advantages were so identified, that what was not to be a public convenience it could not be profitable or prudent for an individual to undertake. That I might the better judge of this, you informed the clerks of the City and of the Leith Harbour Commission, and also, I believe, the magistrates of Leith, of the object of my visit, and of your desire, as the Duke of Buccleuch's agents, that such information as might be considered useful in forwarding the inquiry should be furnished me. I was in Edinburgh a week after this, during which time no communication was made to me; but I have learned from my assistant, Mr. Hartley, who remained some time after me to complete the soundings and measurements, that the city had offered any information that might be required.

While in Edinburgh I received much detail from Mr. Crighton, who has had long experience and given great attention to the subject; also from a deputation of Leith gentlemen, and from Captain Dall, who tendered me, with, I believe, the sanction of the Commissioners, every assistance, and accommodated me with the Commissioners' steam-vessel, in which he accompanied Mr. Stevenson and me. Mr. Cubitt, Mr. Scot and Mr. Anderson have also, without my applying for them, kindly furnished me with copies of their plans and reports.

For the purpose of refuge it does not appear to me that an artificial harbour is much required in the Forth, unless in the case of ships having sprung a leak or being driven in storms with loss of anchors and cables. The Frith itself is a fine natural harbour or roadstead: in heavy gales from the east ships can anchor for a time under the lee of Inchkeith, where the anchorage is good and the depth at low water generally exceeding 18 feet, or they may run up to the Hope above Queensferry, where there is ample depth and space; and from westerly winds the east of Inchkeith and the bay of Inverkeithing afford security. A ship driven into the Forth in distress or taking refuge there would not, unless under very peculiar circumstances, leave the deep water for a harbour, with even 14 feet at low water near the entrance, and a hazardous shore on each side of it. Mr. Ogilvy, who has been actively engaged in shipping for half a century, remembers but one case of wreck in the Forth above Leith, and this was about 30 years ago: it might have been the effect of ignorance or negligence, but even supposing it unavoidable, the rarity of the case proves the excellence of the roadstead.

Although nature has thus done so much, a very superficial acquaintance is required for ascertaining the very imperfect communication between this fine natural harbour and the shore, for the purposes of trade or the fitting out of his Majesty's or other vessels. It may be useless to endeavour to trace the various causes that have tended to prevent improvements of which there is so great a capability, but the facts, as they are, require to be stated with a view to ascertain the remedy.

It has often been observed that the gut formed by the discharge of the water of Leith fixed the formation of a town at that place, and it was probably sufficient for the kind of trade and the vessels that frequented it, the long sands forming a breakwater, and vessels being so built as not to damage by grounding. It is perhaps to be lamented that when the changes in shipping rendered the sands injurious, the site was not left to vessels suited for it, and a fitter situation taken, instead of large sums being expended in attempts to overcome natural obstacles. Had this been done, no one can doubt, I think, that the trade of the Forth would have been very different from what it now is. A contrary course has however been adopted: within the last half century the most eminent engineers of the time have been consulted as to the best mode of improving the harbour, very large sums have been expended, and certainly great good has been done. The details and dates of those works and the engineers who advised them have been fully stated in Mr. Cubitt's Report. The most important were by the late Mr. Rennie,* who planned and executed the wet dock, the most important

* I have been informed that Captain Huddart, whose reputation is deservedly of the very first order, accompanied Mr. Rennie as his colleague on the occasion.

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important appendage to the harbour and the greatest ornament of Leith; the east pier has been extended by Mr. Chapman, the west by Sir John Rennie: the execution of all appears creditable. The exertions of Captain Dall, the present superintendent, have also been most usefully employed. I am informed that in 1826, when he entered office, there was from two to three feet water on the dock sill at low water, but that since the channel has been cleared and deepened the sill is now frequently dry. For a century previous to 1826 the depth on the bar seems to have been without alteration.

The present capability may, I believe, be fairly stated thus: That the channel of the entrance is dry at the low water of ordinary spring-tides; that at high water of spring-tides, say for about three days in each alternate week, a vessel not drawing more than 14 feet is almost sure to get up to the docks; that even with 15 to 16 feet there is a good chance, but some risk; and that during neaps 11 to 12 feet may be reckoned on. All these depths are confined to the top of high water; but as a ship has to get up to the lock before that time, to prevent the danger of her being caught by the ebb and grounding on the sill, the pier gauge very properly indicates six inches less water than the sill, and with heavy vessels great caution must be requisite.

The following scale of the draught of vessels, which is from the best authority, will show what the harbour and dock are capable of:

A vessel of 200 tons draws	- - - - -	12 to 13 feet.
— 300 - ditto	- - - - - -	13 to 16 —
— 400 - ditto	- - - - - -	16 to 17½ —
— 500 - ditto	- - - - - -	17 to 18 —
— 600 - ditto	- - - - - -	18 to 19½ —
— 700 - ditto	- - - - - -	19 to 21 —

according to the build: so that a vessel of 100 to 200 tons may almost be counted on for getting into the dock at high water on her arrival; if she exceeds that burthen, and approaches 300, she must wait perhaps a few days only, but it may be a few weeks, or she must unload part of her cargo in the roads, which is attended with expense and delay, particularly in rough weather, and she is subject to the same inconveniences in loading outwards. I have already stated that even this extent of accommodation is but of modern date.

Had the build of vessels and the leisurely way of navigating them continued as formerly, and had other ports remained in their ancient state, Leith might still have done its share of the increased business of the country. Vessels would have continued to come up and wait patiently for lighters and fine weather to unload them in the roads, or they would have been of so full a build as to be laid upon the sand without damage, or of such a draught of water as to make tolerably sure of getting into dock the first spring-tide; but now when the spirit of locomotion and competition is so much abroad, when a passage across the Atlantic is made literally in about the same time that one from Leith to London used to be, and vessels are of a sharp build to sail fast, but liable to damage by grounding, and when other ports are made to suit this new order of things, it is not to be wondered at that Leith should be stationary while they advance. And then the degree of accommodation is not rendered more tolerable by the lowness of the rates. Mr. Crighton has furnished me with some particulars of the charges, the complexity and number of which, as well as the amount, are objectionable. I have submitted the list to the gentlemen from Leith who met me at Newhaven, and they agreed to their correctness: they form so important a feature in this question that I think it right to state the details.

There are the harbour, the dock and the shore dues.

The first are payable upon every vessel that breaks bulk in the roads, and sends but one package on shore between Figgate Whins, a mile and a half below, and Wardie Burn, the same distance above, the harbour. They consist of beaconage and anchorage, 1½*d.* per ton on four-fifths of the register tonnage; if above 40 tons, 2*s.* 6*d.* for berthage and flagage, which amounts on the average to nearly a halfpenny per ton more, and if she enters the harbour the pilotage is 1*d.* per ton inwards and the same outwards. Thus the charges amount to 2*d.* per ton if the vessel remains in the roads not having taken a pilot, or 4*d.* if she has entered the harbour.

The dock dues are payable on every vessel entering the harbour of Leith, whether she uses the docks or not, but no vessel is liable to them for more than eight voyages in any one year. The scale of dues depends on the port from which the vessel brings her cargo, and partakes much of the system of exclusion, or at least preference, which was the fashion in former days.

	s.	*d.*	
On ships from Greenland and Davis's Straits - - - - -	2	0	per ton.
From the West Indies, Africa or Asia - - - - - -	1	8	—
Mediterranean and Americas - - - - - - - -	1	4	—
Baltic, Spain, France and Western Islands - - - - -	1	1⅓	—
Ports on the Continent not further south than Dunkirk, and not in the Baltic - - - - - - - - - - - -	10	⅔	—
Ports in Great Britain and Ireland, except between Buchaness and Eyemouth, and in the River Clyde - - - - - -	8		—
Buchaness, Eyemouth and Clyde - - - - - - -	4		—

The shore dues come next, and amount to 3⅓*d.* per ton on all goods imported or exported by a freeman of Edinburgh on his own account, and 6⅔*d.* on goods belonging to non-freemen,

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men, if from or to foreign ports, or ports out of Scotland. There is also levied with the shore dues a duty of 1 *s.* 1 ½ *d.* per ton, called the merk per ton, on all goods, not the growth of Scotland, imported into Leith, or discharged within the three miles of coast, which is applied towards the maintenance of the clergy of Edinburgh; also 1 ½ *d.* per ton on all goods imported for erecting and maintaining the drawbridges; and 1 *d.* per ton for the Leith Trinity House, a charity for poor seamen. Goods therefore not the growth of Scotland, or the property of an Edinburgh freeman, pay

	s.	*d.*
Shore dues	–	6 ⅔
Merk per ton	1	1 ½
Pontage	–	1 ½
Prime gilt	–	1
	1	10 ½

If the ship's cargo be sent to more than six different consignees from any port in England, the shore dues and merk per ton are payable by the measurement of the cargo, at 2 *s.* 1 ½ *d.* per ton for eight barrels' bulk; and Mr. Crighton states that this principle of charging by measurement is extended to bulky goods not coming within the rule, by which the rate of dues on many descriptions of bulky goods has been raised from 1 *s.* 10 ½ *d.* to 4 *s.* and even 4 *s.* 3 *d.* per ton of 20 cwt.

Such accommodation and such charges cannot tend to the increase or encouragement of trade.

To say that the harbour is sufficient for the size of vessels frequenting it will in the first place be denied by the owners of the largest class of ships, but were it correct, it is only stating one of the effects of which the want of capability is the cause. I can see nothing in the nature of trade that should confine that of the Forth to smaller vessels than that of other ports. If in despite of the want of accommodation heavy vessels come into the Forth and have their cargoes unloaded into open lighters in the roads, there can be no doubt that with greater despatch, greater security and less expense, the number would be increased. No port is more conveniently situated for the Baltic trade than the Forth, and I know that many ships in that trade are of too great a draught to enter the harbour. Again, with the Forth before it, a coal country around it, and a canal by which goods can be sent to Glasgow in 14 hours, and thence to Liverpool, the district round Edinburgh seems well suited for flax spinning and other manufacturing purposes, a subject that has lately engaged public attention. The flax manufacture is carried on to a great extent in Dundee, which has no canal behind it, and from which goods are said to take a week on the average to reach Glasgow.

Independently of the change that has taken place in sailing-vessels which appear to require accommodation beyond what Leith can afford, steam-vessels have of late years sprung up: these require despatch more than any other, and this despatch it is which causes the great and increasing trade carried on by them. It was so late as 1820 that after a correspondence opened by Mr. Charles Wood of Port Glasgow, I proposed to Mr. Turner of Rooksnest, Surrey, and we to Mr. Watt of Soho, and other friends, to attempt the passage from London to Edinburgh by steam; and in June 1821, the City of Edinburgh, our first vessel, made her first passage, agents of the then shipping companies being certain of the failure of the attempt, and even the celebrated Mr. Watt, whom we consulted, not expressing more than a general opinion of the probability of success. There are now five or six vessels in the same trade, all of them of greater size than the Edinburgh, and all making their passages in shorter time. In some of them a sacrifice of speed is made by building them so that they do not suffer much by entering the harbour; the others, viz. the Watt, the Soho and the Monarch cannot ground without injury. Their cargoes and passengers are therefore put into open boats* a mile from the shore, the unpleasantness of which has been felt by all who have travelled by the steam-vessels; females in particular complain that they sometimes suffer more annoyance between leaving the vessel and landing than on the passage from Blackwall to the moorings off Newhaven. In very rough weather passengers cannot embark or land—hence irregularity and delay; and they frequently remain on board until the morning, whereas, could the vessel have come to a pier or dock on her arrival, they might have landed and got to Edinburgh the preceding night. When there is not water in the harbour the other companies' steam-vessels are liable to like inconvenience, and they must either wait for high water to enter or land their passengers by boats, their vessels paying the dock rates in addition to the harbour and shore dues. The passengers to and from the Fifeshire coast are subject to the same kind of annoyance, but less frequently, as the ferry steam-boats draw less water. The only crossing for horses and carriages being at Queensferry, and causing a circuit of many miles, is also an evil that ought to be remedied.

The treatment of goods by the London steamers is little better than that of passengers. I happened to be at Newhaven pier when some goods were being landed from the Monarch; the style of doing the work and the accommodation for it were more like the running of a smuggled cargo upon the beach than the landing from what is now the principal conveyance for passengers and light goods between London and Edinburgh. For such as it is, Mr. Hamilton,

* I am told that this is likely to be partially remedied by having a steam tender.

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Hamilton, the company's agent, informs me that he paid upwards of 600 *l.* for the boatage of goods and passengers in 1834, 200 *l.* to the Ferry Trustees for the use of Newhaven pier, and, as the vessels anchor in the roads, about 160 *l.* for beaconage, anchorage and berthage; in addition to which, as their cargoes were unloaded at a point eastward of Wardie Burn, they were subject also to the city charges, viz. the shore dues, the merk per ton or ministers' charge, the pontage and the prime gilt, which average 6 *l.* each trip or about 400 *l.* for the season.

I am not prepared to say if the reduction of the charges or increase of facilities would open a coasting trade in coal or any other minerals of the district, but the expense now attached to stone, if it may be taken as an example, amounts almost to a prohibition. The large blocks for the new columns of Blackfriars Bridge come from Craigleith, one of the finest freestone quarries in the kingdom, if not the very finest; they are carted through Edinburgh to Leith Harbour, the only shipping place, where they are put on board by the Commissioners' cranes and men: the cartage costs 4 *s.*, and the shore dues, cranage and shipping 2 *s.* more, making 6 *s.* per ton, exclusive of port charges on the vessel.

Such, then, are some of the facts as respects the accommodation for the trade of all the world with Edinburgh and the district of which it is the port; and whatever difference might exist as to the nature and extent of improvement, it seemed, I may say, universally agreed that some increase of accommodation, particularly for large steam-vessels, is indispensable. You and the parties generally who take an interest in the question know the various plans of docks and harbours that have been proposed: it cannot be useful to extend this report by the detail of them or their particular merits, or otherwise in an engineering point of view. Great pains have evidently been taken by the different engineers in the preparation of plans and the reports and estimates that accompany them.

The chief question in reference to extended accommodation seems to be, whether the addition should be made to the present harbour and docks, or separate from them, at some point where the deep water approaches nearer the shore.

The main argument in favour of the former plan is, that it would uphold or increase the value of the present docks, warehouses and property in Leith, but that a deep-water harbour or pier in any other place would produce the contrary effect, by affording better public accommodation than the present. A long experiment founded on this very argument as the basis of proceeding has been made, and the results of it are now to be seen. There has been great outlay, which has proved unprofitable, hence a heavy debt; but still the accommodation is insufficient, the charges high, the monopoly continued, and the effect of all these evils is the depressed state of the port, and of the trade of the district that has been described. Is any important change likely to take place by the proposed plan of a new harbour, with an entrance to the present docks from the westward, and is this, under existing circumstances, the most advisable plan for immediate adoption? I would observe, in the first place, that in all the plans now suggested the idea of improving the present entrance seems almost to be forgotten, and that of a new entrance from the west into deeper water substituted. This plan was proposed by the late Mr. Rennie; modifications of it have since been suggested by Mr. Cubitt and Mr. Anderson; the general argument applies to all of them.

I think it will be agreed, even by the engineers and patrons of this scheme, that but for the supporting of the present property and system, none of the plans would have been recommended; that another situation would have been preferred where the deep water is nearer the shore, so that much of the artificial excavation and the future expense of dredging would be saved, and where probably the charges would be lower than could be afforded were 150,000 *l.* or perhaps 200,000 *l.* added to the present debt. I much question the policy of this almost forced measure upon the interests, the protection of which is its avowed object. That a heavy addition will be made to the already large debt is certain, unless indeed the debt be considered as a gift or grant, which, from what I have lately seen in another more national harbour business,* there is little chance of. Will the additional rates pay more than the interest of this, after deducting the expense of maintaining the depth at the entrance and in the basin, and other charges? If there be a doubt, it deserves consideration. Mr. Cubitt's plan goes only to nine or ten feet water at the site of the entrance; the addition is to be obtained by dredging; and the being able to support it and the artificial depth in the harbour without great expense is, to say the least, problematical. The late Mr. Rennie planned a dock on the west of the present one,† but I have not been able to obtain a copy of his report, and therefore cannot state positively what he proposed as the depth at the western termination, unless by judging from the present depth at the site of his entrance, which is I see only three feet under low water; and this leads me to doubt if Mr. Rennie contemplated the capability of making and preserving so great a depth as Mr. Cubitt has supposed. Steam-vessels not being in use at the time, depth at low water was to be sure less necessary than at present.

The apprehension entertained as to Leith is, that a new or rival scheme would injure its trade: the calculations are founded upon a certain tonnage being to be loaded or unloaded, and that whatever is taken to another harbour is *pro tanto* a deduction from Leith, and therefore injurious to the property in it and to the security of the money advanced by the Treasury. This principle, it must I think be admitted, offers but indifferent security for any further

* Dover.

† It appears to me that deeper docks with an entrance to the westward, as proposed by Mr. Rennie, would be a more useful appendage than a harbour in which a heavy ship or steamer could not lie afloat at low water.

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further loan; but besides this, the argument is opposed to the general interests of the port and the accommodation of trade, for it will be allowed, I presume, that these would be promoted by any convenience for landing, even if it had not the advantage of lower rates; if lower, so much the better. I would take an extreme case, and suppose what the public would like best, namely, an additional pier or harbour, with lower rates. It by no means follows conclusively that the trade or even the revenue of Leith would be diminished in the way that has been supposed; might not the accommodation and the low rates so increase the trade and the shipping as to produce a contrary effect? When Brindley was asked in the House of Lords, what chance the Duke of Bridgwater had of being compensated for his outlay when the whole of the river trade to Manchester would not pay the interest of the estimated cost of the proposed canal, he replied that he "expected the canal would make its own trade." The result has justified his foresight, and every new conveyance since has also created a trade for itself: the last was the Liverpool and Manchester railway, which it is well known was strenuously opposed by all the canals, and yet each canal now carries more goods than before the railway was opened! To descend to a smaller scale of illustration, it is generally said that the owners of stage-coaches in London make larger profits, now that opposition has obliged them to convert their coaches into omnibuses, and to charge half or a third of the old fares, than when the monopoly existed. The very small number of vessels in Leith harbour when I was there looked very like the slow-coach system, and I have no doubt of a great increase by good accommodation and a lower and simpler scale of rates. I have been told that Baltic and other goods are taken to Grangemouth, thence conveyed to lock No. 16 on the Forth and Clyde Canal, and carried back to Edinburgh by the Union Canal at a lower rate than if they had been landed at Leith; and a deep-water pier below Grangemouth, which is spoken of, would tend to increase the accommodation for heavy vessels there. The communication from the Clyde to Edinburgh, already great, is on the increase, and the intercourse by canals has been improving more rapidly since an Edinburgh and Glasgow railway was projected. I am informed also that, to avoid the rates, cargoes from small vessels are sometimes landed below the Commissioners' boundary with risk and inconvenience.

Notwithstanding these facts, my opinion is that injury may be done by attempting too much in too great a hurry; that it will be well to proceed by degrees, but that time should not be lost before something is done, and that the first thing wanted is a pier in deep water, to which heavy steamers might come at all times of tide, and having landed their passengers and cargoes, go off to the roads to come alongside again to reload; heavy vessels might also lighten at the pier so as to be able to enter the dock. I would propose a T shape, and for economy, expedition, and the avoidance of an objectionable interference with the tide so as to cause deposit, would recommend the work to be of cast-iron piles, or timber coppered under low water, the framing of the deeper part from the shore outwards to be left open at first for the free current of the tide, and the cross head to be filled in with rubble stone to nearly the high-water level so as to form a breakwater. Though the cross head be so filled up, or even built of stone, the objection to causing deposit will not apply as it does in the direction of the tide. The principal reason for the construction I have described is economy, and that vessels lie better alongside an erection of this kind than a solid stone pier is proved by experience. The pier and head are supposed to be not less than 35 feet wide, and the head 1,000 feet long, the latter being all in deep water, say 12 to 14 feet at ordinary spring-tides. In moderate weather steamers might lie on both sides of the head; there is space for four of the largest class on each side, and from the head towards the shore there is a length of 1,500 feet, with from four to 12 feet of water. An opening near the head with a bridge would enable vessels to pass to either side of the pier in case of a sudden shift of wind, without going round. Cranes would be fixed for the quick unloading of the steamers and one or two powerful ones for the engines and boilers. A shed warehouse would also be required for passengers' luggage and goods, as the object would be to unload as much as possible when the vessels are afloat.

The communication with the opposite coast would be materially improved; passengers might land or embark at the pier at all times of tide, and with a proper landing-place on the opposite side, the convenience for the crossing of carriages and horses would, by saving distance, be very great. In case of the present points on the Fifeshire side being found insufficient for the landing and shipping of carriages, I am informed there are excellent situations with deep water close to the shore at Hawk Craig, to the eastward of Aberdour House, which is nearly opposite Granton.

I have heard and read various statements of the advantages and disadvantages of Trinity, Newhaven and Granton as the site for an improvement. The two former are nearer the centre of movement in Edinburgh than Granton, which again is nearest the Union Canal basin and the probable termination of a Glasgow railway if carried into effect. Granton is also nearest the deep water, and less exposed to silt up: I have had soundings taken, which prove Messrs. Stevenson's correctness in this, and their statements to me have throughout been confirmed by the facts. Granton is nearer the islands higher up the Forth, but as comparative danger on that account appears to me out of the question, it had better not have been named; and the distance between Trinity and Granton is not such as to make the superiority of the roads or mooring-ground in front of the former, supposing them to be so, of much consequence to steam-vessels.

Granton being westward of Wardie Burn is beyond the corporation boundary, and therefore exempt from the rates. I conceive this to be perhaps the most decided argument in its favour, for it will exempt the steam-vessels from part of their present charges.

In the accompanying plan the various designs by different engineers are shown, and also the

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the pier now proposed by me, if erected at Granton from the Ox Craig, and also if as an extension of the present pier at Newhaven. The works described would amount to from 50,000*l.* to 60,000*l.*, which is about half what the same size of pier would cost in solid masonry. It would be done in less time than any other plan, and give effectual relief to the steam trade.

The Duke of Buccleuch might be remunerated by a small tax on passengers and goods landed at the pier, and by bringing his Granton estate into play, and with a moderate outlay, the convenience would, I apprehend, be such as to yield a fair return, but I have not materials for a calculation of this. Should his Grace consent to the measure, the heavy outlay by Government or the city would be unnecessary, for the present at least; the effect of the better accommodation upon trade would be proved, and a judgment would be formed of the expediency of further works, whether by the Dock Commissioners or the Duke, while the pier I have proposed, if executed at Granton, would not be in the way of any future improvement to the eastward.

Will the Leith interests object to this plan as taking the trade from them? I think they ought not. It is forced work to take large steamers into the harbour, and but for the Shipping Company having smacks and buildings there, probably their steam-vessels would remain in the roads notwithstanding all the inconveniences. It should also be considered if this would affect the property, particularly towards the harbour and eastward, so much as a new harbour opening from the west, and carrying the trade generally in that direction, and also if the new entrance might not tend to the neglect of the old one in its present state, and to comparative indifference as to its further improvement. To say the least, there would be two interests and the expense of two establishments.

Again, is the hope of further improvement of the present harbour desperate? It is allowed to have been deepened three feet within the last 10 years by dredging and other means; a further addition of three feet would be a most important improvement, but I do not think that such a depth, if made, would be maintained without occasional dredging. It is admitted, however, that this will also be neeessary to preserve the depth proposed by Mr. Cubitt at the western entrance.

That the general movement of the sand is westward seems proved by the relative levels on the east and west side of any pier or projection. Newhaven pier was built about 15 years before Messrs. Dall and Leslie's soundings, and these show a difference of from 18 inches to two feet between the two sides. It is desirable therefore to keep the sands on the east of Leith Harbour from getting to the westward into the entrance, and a causeway is now being carried out from the pier head to the Martello Tower to effect this object; this will go to lessen the expense of dredging, and should the breakwater designed by Mr. Cubitt be made, it will be the more necessary, as the effect of that work, extending out as proposed, will rather be to stop any sand moving to the westward, which will then rise on the east side, and tend to increase the expense of dredging at the entrance of the harbour.

After a consideration as full and impartial as I have been able to give the subject, and being fully aware from my own conversations with the Duke of Buccleuch that his Grace's feelings are the same as you described to me, I really can see no way in which a remedy to the present defects can be applied so economically, so expeditiously and with so little interference with existing interests and rights as the measures I have stated. Whether the Duke will agree to such a work must depend on himself, but I feel assured from what I have seen that an expression of a wish on the part of the city of Edinburgh would have weight, and that it would be to the benefit of the inhabitants of that city and the district round it, I have no doubt. It might perhaps be difficult to convince the Commissioners or the city creditors that the effect of reducing and simplifying and equalizing the rates would improve their revenue, but this is evidently required along with the works I have proposed, whether executed at Granton or Newhaven, to give fair play to the trade of the port. That an increase of trade would be the consequence is certain, and even in point of immediate revenue I think the experiment worth trying.

I am, &c.

James Walker.

Great George-street, Westminster,
May 25, 1835.

Appendix, No. 3.

REPORT by *John Rennie*, Esq.

Appendix, No. 3.

Report of *John Rennie*, Esq.

Plan 9.

My Lord, London, 28 February 1827.

I HEREWITH beg leave to transmit, for your Lordship's information, the result of my late visit to Edinburgh and Leith, as regards the best mode of carrying into effect Mr. Chapman's proposed scheme for the improvement of the old harbour of Leith; and it is with great reluctance I beg leave to give my opinion as to the general propriety of the scheme, fearing that otherwise I may become, in some measure, responsible for its results. At the same time, I respectfully trust that your Lordship will excuse me from any desire of intruding an opinion that may be uncalled for; but my late father having been so materially interested, I consider that I should not have acted candidly if I remained silent under the present

present circumstances. I will therefore proceed to state my objections as briefly as possible. They are as follows:

Objections to Mr. Chapman's plan of extending the piers, which was carried into effect in 1828 and 1829.

1st. The small additional depth of water that will be obtained, and that only at the entrance.

2d. The liability of filling up, and the necessity of constant dredging.

3d. The expense compared with the advantage to be gained.

Want of water in Leith Harbour.

Depths.

With regard to the first: the great objection to the port of Leith, in its present state, is the want of water sufficient to accommodate the increasing demands of the trade. At high water of neap tides there is only 14 feet, and at springs 17 feet on the bar; so that vessels drawing 13 feet 6 inches water cannot come up to the quays at all times, and when ready for sea, on account of the shoalness of the bar, they are detained in a similar manner. To obviate this serious evil, it is proposed to extend the east pier to the Martello Tower, a distance above 2,800 feet, and to run out a western pier, 1,400 feet long, from near the termination of the second dock, and by this means to confine the low-water channel, and scour away the bar, or rather remove it into deeper water, where the current may prevent it from being again deposited. That a certain depth of water, where the bar is now situated, would be gained, I am willing to admit; but I do not conceive that above 2 feet 6 inches will be gained by this means, while the depth of water at the tower would be the same as before.

Gain of water only 2 feet 6 inches.

Facility of deposit increased by extension of western pier.

Dredging necessary.

With regard to the second: the western pier, it is true, would have the effect of tranquillizing the space enclosed between the piers and the harbour upwards; but then the facility of deposit would be greatly increased, and in a short time, with the exception of the small river channel, the greater part of the space enclosed would be filled up, and must constantly be maintained clear by dredging at a heavy expense; and it happens, unfortunately, that this evil would be the greatest in front of the proposed naval yard; and though this might be partially remedied by means of sluices from the docks, nevertheless it could not be done so effectually without a heavy expense.

Estimate of expense of extending the piers.

With regard to the expense of this plan, its uncertainty renders it difficult to calculate; but taking the length of the east pier as laid down, I should fear that it would not be done for less than 60,000 *l.*, and the west pier, 35,000 *l.* to 40,000 *l.*, besides the dredging apparatus, and 10,000 *l.* for the boundary sea wall of the naval establishment, being in all nearly 120,000 *l.*, besides the naval building, for the purpose of lowering the bar about 2 feet 6 inches, which, for such inconsiderable advantage, is certainly a very large sum.

The next and most important question naturally arises, What plan is most advisable for obtaining the desired object? and here it may be observed, that as the shore deepens towards Newhaven and westward, the current becomes stronger and the bottom cleaner, nature points out that the entrance should be extended in this direction, which would at once get rid of the water of Leith, its bar and deposit. The above has, I believe, been admitted by everybody, although the expense of the execution has deterred your Lordship from entertaining the idea; and certainly at this moment money cannot well be spared, and economy cannot be too strictly attended to. Nevertheless, upon considering the subject again, I think it will be found that the principal part of the late Mr. Rennie's plan may be obtained with a comparatively small expenditure. The grand object is to carry the entrance into deep water, in order that the largest class of vessels may enter or depart from the port at all tides; and to effect this I would propose, that instead of completing the third great basin according to the original plan, a ship canal, without quay walls, should be made in the same direction, with an entrance lock near where the late Mr. Rennie proposed to make the cross wall, dividing the dock from the harbour; from thence a harbour to be made, carrying out the entrance into about 8 or 10 feet at low water of spring-tides, which would give 28 feet at high water of spring-tides, and 22 feet at neap-tides; and would enable vessels of 200 tons to enter and go up to and depart from Leith at all times, and the largest class of vessels at about half flood. Moreover, they would always be able to get out and make their passage during the prevailing winds from the westward, which would be extremely difficult, and in some cases impossible, by the former plan of extending the present old pier. In carrying these works into effect, it would not be necessary to construct the whole of the walls of Ashler masonry, in which a large portion of the expense consists, with the exception of the entrance lock and pier heads. The remainder would be composed of rubble embankments, and where the canal is proposed, and lined with clay puddle, to keep in the water. The banks might be formed with earth and clay faced, and having the sea slopes only defended with stone: by this means the estimate would be materially reduced, and the whole might be accomplished for about 220,000 *l.*; and for this the grand object, depth of water and shelter, free access and departure at all times would be obtained. It has been objected to this plan by some of the merchants of Leith, (but by no means the principal,) that such a measure would ruin the property of Leith; but in this opinion I do not agree, because a greater facility than ever would be given of bringing up ships to the town quays, and dispatching them, when ready for sea, which, by extending the present piers, will not be accomplished. By extending the entrance towards Newhaven, as proposed, the distance from the entrance to Leith would be nearly the same; and the present docks would operate as a canal, and vessels belonging to the town would always be enabled to pass and repass them to their own warehouses without inconvenience. Moreover, the present entrance by the old piers would still be available also for the smaller class of vessels whenever the state of the bar would permit, and then there would be two entrances instead of one.

Deep-water entrance necessary.

Specification of Sir John's Plan.

With regard to the naval establishment, the ground purchased some years since at Annfield would then be available, and a very complete dockyard, upon a small scale, might be made,

made, capable of repairing frigates, or even larger vessels, upon an emergency, which will never, I fear, be the case with the present plan. It was observed that at Newhaven the water had shoaled considerably since the erection of the new landing pier. Upon this there existed some doubts; and when lately there, I made repeated inquiries, and found, that while on the west side the water had shoaled about two feet, on the east side there had been scarcely any perceptible alteration; for the state of the adjoining sand-banks depends so materially upon the prevalence of particular winds, that no correct conclusion can be drawn. Concerning the shoaling on the west side of the pier, this may be attributed to there being no western pier, as originally intended, to prevent the driving of the sand, which has a strong tendency from the westward. If the piers were to be extended properly seaward, I should apprehend no evil consequences from this. If, however, the present Leith piers are to be extended to the Martello Tower, according to the plan now resolved on, the water at Newhaven would no doubt diminish very rapidly, and the expense of constructing an entrance at Newhaven, if required at any time hereafter, would be materially increased, in consequence of its being necessary to carry it farther westward. Moreover, the entrance harbour would be able to accommodate steam-boats and the traffic of the ferries, for which advantages they would no doubt contribute. Indeed, I understand that above 30,000 *l.* was about to be expended on their improvement, which, combined with the sum now about to be laid out, would make nearly 150,000 *l.*, being only 70,000 *l.* less than the other; the success of which would be certain, while that of the former will be problematical.

Upon the whole, therefore, viewing impartially all the circumstances of the case, I am decidedly of opinion that the best plan for the improvement of Leith Harbour would be to extend the entrance to the westward, according to the original design of the late Mr. Rennie, with the alterations above suggested; and I am further of opinion that it will ultimately be found most economical.

With the advantages of a good port, such as would be obtained by the measures above recommended, the trade of Leith might be carried to any extent; and the largest class of vessels now used in other ports would be accommodated here, and avoid all those delays and other inconveniences to which they are now subject, and which it is so anxiously desired by all to be removed.

I have consulted my brother, Mr. George Rennie, upon the above, and he cordially approves of the whole. For the better illustration of the subject, I have made the accompanying plan, which will, I trust, be sufficiently explanatory.

I cannot conclude this Report without again apologizing to your Lordship for this interference; but being uncertain how far I might be considered responsible by the success of the present plan, and my late father having been so materially concerned in the other, I thought if I remained silent, it might be construed into acquiescence, which, in justice to his memory and myself, I thought it right to explain. Having said thus much, I trust I shall be excused; at the same time, I beg to observe, that in the event of Mr. Chapman's plan being continued, I shall use my utmost endeavour to have that portion under the direction of the Navy Board executed in the best, and at the same time the most economical manner, and be happy to render every assistance in my power to the other part of the scheme also, in order that the whole be rendered complete; and in this I trust that my gloomy prognostications may not be realized.

I have, &c.
(signed) *John Rennie.*

The Right Hon. Lord Viscount Melville, K. T.
&c. &c. &c.

Gentlemen, Admiralty, 7 March 1827.

Mr. Rennie, on his return lately to London, addressed a letter to the Navy Board, with plans of the intended Eastern and Western Piers at Leith, and I have no doubt that the Navy Board, under the sanction of the Admiralty, will approve of his suggestions; I believe also that they have been acquiesced in by Mr. Chapman, and I presume that the plans will be forthwith transmitted to the Commissioners of the harbour and docks.

I think it right at the same time to acquaint you that Mr. Rennie has addressed a letter to me, of which I send herewith a copy, together with the plan which accompanied it for an entrance to the Leith Harbour from Newhaven, and I recommend to you to take the necessary steps for submitting those documents with as little delay as may be practicable to the Commissioners.

As far as the Naval department is concerned, I have no hesitation in expressing my decided preference in favour of Mr. Rennie's plan; and considering not only the greatly increased accommodation which would be afforded thereby to the naval service, but also the saving of expense in erecting the proposed western pier and the wharf walls of the naval yard, it would be an advantageous arrangement for the public to contribute largely towards the execution of Mr. Rennie's plan. As far also as regards the ferry Trustees, though they might not be able to afford anything approaching to the sum mentioned by Mr. Rennie, they might nevertheless be disposed to give material assistance.

When the improvement of Leith Harbour was suggested and urged a few years ago, I was one of those who, though with much reluctance, abandoned entirely, on account of its

Appendix, No. 3.
Report of *John Rennie*, Esq.

expense, any idea of carrying into effect the plan of the late Mr. Rennie for an entrance at Newhaven, more especially when there was brought forward at the same time a plan greatly inferior in point of expense, and not beyond the means that might without difficulty be provided for its execution. Now, however, the case is materially altered: the Newhaven plan is brought within a compass which ought to induce the Town Council of Edinburgh and the merchants and traders of Leith to make an effort for its accomplishment, and thereby improve the harbour to the greatest practicable extent; while the expense of the plan proposed by Mr. Chapman is raised so much as to render it very problematical, even if the money can be obtained, whether it will not greatly outweigh the very limited benefit which could be derived from that improvement. It must also be recollected, that independently of any difficulty in providing for the expense of the eastern pier, now so much increased beyond Mr. Chapman's estimate, the same difficulty will occur in regard to the western pier. When I undertook on behalf of the public to execute that portion of the work at the expense of the Naval department, it was on the footing of Mr. Chapman's estimate, and with reference to the benefit which we should derive from the exclusive use of the western pier, and from the shelter it would afford to the landing of boats from ships in the roads. Even if the expense beyond the original estimate had been doubled, it might have been submitted to; but now when we are told that we must be prepared to meet an expense five times as great as that estimate, I do not feel myself at liberty on behalf of the public to embark in any such undertaking. We are bound to perform what we have engaged to do, and to that extent I am willing to go, or even as already stated, to double the amount, but I cannot undertake what is now proposed. If, therefore, the western pier is to be erected on the plan recommended by Messrs. Rennie and Chapman, the excess beyond what the Navy ought reasonably to be called upon to contribute must be provided from other sources.

I have in the former part of this letter recommended to you to bring this whole matter as soon as possible under the consideration of the Commissioners, because if the plan of a canal from Newhaven is adopted, and Mr. Chapman's scheme to be abandoned, a new Act of Parliament will be necessary. On the other hand, if the latter plan is to be adhered to, immediate steps ought to be taken to supply the funds that will be required beyond the original estimates.

I am, &c.
(signed) *Melville.*

Captain Boswell, R. N.
Robert M'Nair, Esq.
John Day, Esq.

Appendix, No. 4.

Appendix, No. 4.
Report of *J. Anderson*, Esq.

REPORT on the Present State of LEITH HARBOUR, and the Practicability of rendering available its WET DOCKS, by means of a Deep-Water Entrance at *Newhaven*, and a communicating DOCK or SHIP CANAL, by *James Anderson*, Esq. Civil Engineer; with Plan and Estimate.

Plan 10.

PRELIMINARY OBSERVATIONS.

BEFORE entering into the details of my plan for the improvement of Leith Harbour, now submitted to the consideration of the public, I consider it necessary to request attention to a brief statement of facts which bear upon the subject. They relate, partly, to the opportunities occurring in the exercise of my profession, during a number of years, for becoming acquainted with the circumstances of the locality in question; and, partly, to the appearance of the following Report itself, at a time when the opinions of many individuals, who may be considered competent judges, no less than of parties deeply concerned, seem almost determined in favour of another project,—and this, too, notwithstanding the doubts repeatedly expressed as to its practicability. On the one hand, therefore, I am desirous to be freed from the charge of presumption; and, on the other, to account for a delay which may have been reckoned as a proof of indifference. But, whatever decision may be arrived at on either or both of these points, I feel assured that the performance of the task enjoined on me, by several influential individuals, and numerous inquirers, together with the vast importance of the interests at issue, is equally delicate and unavoidable.

Since the year 1816, I have had repeated occasion, while engaged in proposing many sea-works for various parts of the Forth, and, more especially, in executing others in the vicinity of Newhaven, carefully to examine the nature of the immediate and adjoining coast, the soundings at various distances from the shore, the flow of the tides, the effects of the winds and currents; in short, all the peculiarities requisite to be known by an engineer practically employed on the spot. It may be satisfactory to mention some of the opportunities for making the observations thus referred to.

In that year, I was engaged in preparing a chart of part of the east coast of Scotland, comprehending the Friths of Forth and the Tay, where my attention was necessarily directed both to the soundings and the currents. In 1822, I constructed the present bulwark and sea-wall opposite the estate of Wardie, the former structures having been repeatedly washed down; and, I may be permitted here to say that the durability of the works, in their very

very exposed situation, has been as gratifying to Captain Boswall, the proprietor, as it is confirmatory of the principles adopted in their execution. Again, in 1824, I was employed by the trustees of the Cramond district to plan the approach to Newhaven Pier, which was effected by making an encroachment on the sea, and consequently required special attention to its effects, together with the new road leading westwards along the beach, and the sea-works connected therewith. In 1830, I was engaged in renewing nearly the whole structure of the extremity or seaward abutment of the chain pier at Trinity, which was in a very dangerous condition, owing to the state of decay into which the whole of the wood work had got from the action of the sea-worm. It was both a very difficult and hazardous operation to remove and replace nearly the whole of the piles, and, at the same time, to preserve the tension or great strain on this part, which supports the whole structure of the pier.

Still more lately, in 1833, at the instance of the proprietor, I planned the low-water pier and wet docks, &c. proposed to be erected at Trinity; while a railway, to connect them with Leith, was at the same time incidentally contemplated, should this be deemed expedient at any subsequent period. The position assigned to these works, I acknowledge, appeared to me eligible in several respects, for the purposes then in view; and my opinion in respect to it was given in the report drawn up by me on that occasion, dated 30th September 1833, as will be seen in the prospectus, published along with the plan, in December last.

At the period last mentioned, I was in reality quite alive to the great advantages likely to result to the community at large, and more particularly to Leith, were the extensive docks of that port connected with a suitable entrance from the west; but, being professionally engaged at the time by the proprietor of Trinity, I could not, in strict justice to his interests, or his then sanguine hopes, propose any plan by which these might eventually be frustrated or impaired. The idea of a ship canal between Newhaven and Leith—the only practicable scheme by which, in my estimation, the latter could be rendered available as a harbour—did not, consequently, find an argument, or so much as a name, in the labours to which I considered myself then in honour restricted.

Shortly afterwards, owing to circumstances, which must be adverted to here in the most general manner, because under discussion, unavoidably, before another tribunal, I conceived myself entirely relieved from any obligation to this reserve, and at liberty to advocate the claims of a different position, and of a plan, immediately to be developed, as, in my judgment, far superior, while it would conduce to more enlarged interests. My views and sentiments regarding these, I have now to state, were embodied in a sketch plan and preliminary report, dated 21st April 1834.

These bore reference to a low-water pier, and a floating basin, with sea or flood-gates, for steam-vessels, a small basin for outward-bound vessels, and a ship canal to communicate with the western wet dock at Leith. The report stated the probable expense of the whole work mentioned, namely, about 150,000*l.*, together with the likelihood of adequate return for capital employed, derivable from various sources. Thus, then, it will be observed, my views were explicitly directed, in the month of April last, to the practicability of redeeming the port of Leith from the character of a merely tidal harbour, at an outlay considerable indeed, but by no means disproportioned to the exigencies of the case, and the benefits certain to be realized. Many individuals, I am confident, must distinctly recollect having both seen and heard of the plan thus adverted to, at or shortly after the period now mentioned; and I need only appeal, in evidence of this remark, to Alexander Goalen, esq. Starbank, or to some of his immediate friends, who are thoroughly aware of the reasons which brought me into acquaintance with that gentleman. In point of fact, he himself very correctly foresaw the advantages of uniting Leith with a low-water harbour at Newhaven, by means of a railroad; but, having spoken on the subject among persons able to judge of its merits, he was given to understand, that with the same object, I had actually proposed a more effective mode of communication. Interviews accordingly took place between us, and with some highly respectable gentlemen interested in furtherance of the project, which, so far from being kept secret, was already known to and discussed by an influential portion of the community. For proof of this assertion, and because it bears on both the points aimed at in these preliminary remarks, I have now to introduce the following letter addressed by me to the Honourable the Commissioners for the Affairs of the City of Edinburgh:

"My Lords and Gentlemen, "Shandwick-place, 27 Oct. 1834.

"At your meeting on 21st April last, John Bonar, esq. of Ratho, did me the honour of laying before you a sketch plan, with relative report, designed and drawn up by me, for improving and rendering available the harbour and wet docks of Leith. You will probably remember that, at the period mentioned, sufficient time was not allowed for such consideration and inquiry as might have warranted any decision on the merits or defects of these documents; and that, in consequence, as well as by special request of his Lordship, they were next day forwarded to Lord Melville, one of your number, together with a letter explanatory of my views on the subject.

"These views were directed to the following points, namely, 1st, 'The accommodation of steam-vessels, and the convenience and safety of passengers, so loudly called for by the public, but which Leith Harbour, by its present entrance, cannot afford.' 2d, 'The union of the wet docks at Leith, with a proposed low-water pier at Newhaven, by means of a ship canal, and the consequent transformation of Leith into a low-water harbour.' 3d, 'The erection of the low-water pier was also intended to serve the purposes of the Fife and Mid-Lothian ferries.'

Appendix, No. 4.

Report of *J. Anderson*, Esq.

"In the letter stating these particulars, which, according to my judgment, conjoined all the interests actually engaged, I had occasion to apologize for the unfinished condition of what was presented merely as a sketch; and expressed a hope that his Lordship, who was then on the eve of setting off for London, would favour me with his opinion on the measure proposed. The answer of his Lordship, returning the documents, was so far in accordance with my own sentiments, that it contained these words, 'I have long been satisfied that Leith Harbour will never be made adequate to what it ought to be, and might be, until the late Mr. Rennie's plan of an entrance from Newhaven, or some plan on that principle, shall be carried into effect;' but his Lordship gave me no reason to expect that, in the then advanced period of the Session of Parliament, anything could be done in regard to my proposal. This reply was dated 26th April. Immediately afterwards, and notwithstanding the intimation thus given, the documents to which it related were transmitted to Government through the kindness of an official gentleman, who can impart information as to the mode of their conveyance.

"Having so far taken steps to attract due notice in the quarter to which it was of most consequence to gain access, and which I chose to address rather than force myself on the attention of the public, at that time, as I believed, not a little wearied with projects of the kind, I set about preparing a correct and finished plan, in which the proposed works were greatly simplified, and the expense of the whole I estimated at 120,000*l.* That plan would have been published by me three months ago, had not Government appointed an engineer to report generally on the subject, and to point out which of the various suggestions or projects connected with it seemed to him preferable.

"From the circumstances thus detailed, it may not be thought unreasonable that I expected my own humble labours would have obtained at least some sort of acknowledgment on the part of the gentleman selected for this important duty, because, considering at whose instance he was authorized, the presumption appeared very natural that he would be put in possession of every material calculated to aid him therein, and because, if he had been so, the fact of my having anticipated his general design, or having even approximated his own plan, was most certain to be eventually demonstrated. It is known to many individuals already, and, probably, will not be denied by any who take the trouble to institute the requisite comparison.

"I may be excused, perhaps, from further trespassing on your time by referring to an article in the London Courier of the 15th inst. It is obviously offered as a defence of Mr. Cubitt against the charge of omission or neglect, to which some of my friends seemingly conceived he was liable. But, while more may possibly be hereafter advanced in his behalf, I shall only say, that it does not strike me as being very convincing, inasmuch as it leaves altogether unanswered the material question,—was he or was he not aware of the existence and purport of my plan before he drew up and published his report? With this remark, I leave the words in the Courier to speak for themselves.

"'It is also said (various strictures, &c. having been adverted to,) that Mr. Cubitt's plan is very similar to that proposed by Mr. James Anderson, civil engineer in Edinburgh, who is, we believe, a very intelligent and skilful professional gentleman. This is very possible, and in no degree disparages the plan of Mr. Cubitt, who, however, it is known to us, never saw Mr. Anderson, nor made any use of his plans.'

"It remains for me only to mention, that in the plan now brought before you, I have pencilled the works proposed by Mr. Cubitt, that I have also sent a sketch of his plan, with a copy of Messrs. Dall and Leslie's chart of the soundings, for the purpose of reference, and that I shall feel highly honoured by your opinion on the claims to attention which I have thus taken the liberty of submitting.

"I have, &c.
"*James Anderson*, Civil Engineer."

At the time of writing this letter, which, I submit, is conclusive as to my having anticipated the general principles advocated by Mr. Cubitt, I had seen only such portions of his report as appeared in the Edinburgh newspapers; and, as the copy of it afterwards printed at Leith did not give No. 1 of the Appendix, containing "A List of Plans, Reports and Papers examined and referred to [by him] in making the inquiry for the [his] foregoing Report," I could merely infer, but not certainly know, the fact of my plan having been in his possession before he either commenced or finished his own labours. One passage in his Report, and one only, so far as I could judge, seemed to be an allusion to what had been proposed by me. It will be found in p. 178, where, expressing his opinion as to the possibility of obtaining every requisite object, "without rendering useless anything which has previously been done for the improvement of Leith Harbour," Mr. Cubitt conjoins "without any additional dock, ship canal, or lock-work, save and except an entrance-gate or lock at the western end of the present dock, as a communication with them." But this language, very conceivably, might have been employed in relation to some explanation of the works of my plan, which had been communicated to him by others, though that document had not been in his hands. Looking solely to the above passage, therefore, my inference was not by any means necessarily correct. The words of the Courier, again, as quoted in my letter to the Commissioners, though exceedingly well calculated to satisfy any ordinary reader that the allegation to which they reply was erroneous, left my mind as they found it, in a state of uncertainty; but an uncertainty, I acknowledge, mingled with disapprobation of the spirit which neither positively denied nor frankly admitted the circumstance in question. "Mr. Cubitt," says the journal, "it is known to us (how does not appear), never saw Mr. Anderson, nor made any use of his plans." Be it so; never seeing

seeing me, and never seeing my plans, were clearly different things; while the assertion, in regard to the latter, might be interpreted consistently enough with the possession of them. Mr. Cubitt, in short, though laudatory of individuals from whom personally he received information, and making special references to various documents which did not stand in the way of his own project, might have had good reasons for taking no occasion to meet with one man who was quite easy of access, and also for avoiding the direct or minute assistance which a single paper was fitted to afford him. Here, however, I am saved the pains of criticism and conjecture, by a letter in the Edinburgh Advertiser of the 28th October, signed D. E. It expresses the identical reflections which I myself was forced to entertain, but in a tone which, as a party concerned, I should not have ventured to assume. With this explanation, then, it may be subjoined, as denoting the kind of surmises which the dexterous article in the Courier tended rather to confirm than to remove. *

All doubt on the question of possession, I have now to state, was set at rest by what I learned shortly afterwards, as will be seen by the following letter addressed to the editors both of the Edinburgh Advertiser and Caledonian Mercury, and inserted in these papers by way of preface to the communication already given. It states, in addition, both the reason for publishing a memorial which had originally no other than what may be deemed a private destination, and the cause of delaying a more ostensible appearance to which I was still subjected.

"Sir, Shandwick-place, Nov. 3, 1834.

"Many individuals, both publicly and privately, have urged me to take measures for obtaining due notice of my plan regarding the improvement of Leith Harbour, and expressed surprise that, among numerous paragraphs and letters from others on the subject, not one has appeared from myself. Though these suggestions had great weight with me, yet, being occupied at every leisure moment in preparing for the publication of the document itself, I had not time to draw up any statement from which there could possibly arise any advantage. On second thoughts, however, an intermediate course has presented itself, which may possibly prove satisfactory to all who are interested.

"The following letter, though not intended for publication, will amply explain at least my general views on the subject, and some of the steps adopted by me in furtherance of them.

To

* "Sir,—In the number of your paper of the 10th inst. there appeared a paragraph relative to the similarity between the plans of Messrs Cubitt and James Anderson, for improving or rendering available the harbour and docks of Leith. It gave me satisfaction, as an endeavour to do some justice to the latter gentleman, whom, as there stated, the report of the former had altogether passed over, though by no means silent as to the labours of other individuals known to have speculated on the general subject of improvements in that quarter. The paragraph, moreover, seemed to give the preference, for reasons expressed, to Mr. Anderson's plan, so far as it differed from Mr. Cubitt's; and here, too, I have no hesitation to declare my approval, founded on comparison of the statements to which I have had access. I am, substantially, in fact, of the same opinion with a correspondent of your contemporary, the Edinburgh Courant, who, in that paper of the 25th instant, having advanced an objection to part—an important one—of Mr. Cubitt's proposals, calls public attention to the earlier, and, in his judgment, more eligible project of our townsman. The writer, like myself, alludes to his having seen—he says repeatedly—Mr. Anderson's plan, adding, what is of consequence in regard to the question of priority of suggestion as well as to merit, 'I know that, in April last, it was submitted to several influential individuals and professional men, whose approbation it has universally received, both before and since the publication of Mr. Cubitt's plan.'

"Now, Sir, admitting as facts, that the similarity in design, under any qualifications whatever, is demonstrable; that the precedence, as to time, of Mr. Anderson's plan is likewise capable of proof; and that there are persons, presumed to be competent authorities, who award to it the preference on those points in which it does not agree with its younger rival; can there be any thing unreasonable in wishing for suspense of decision on the part of all the bodies or parties concerned till such investigation of relative claims be had recourse to as shall fully warrant it, or in deprecating the celerity of action which has been urged in certain quarters, manifestly in ignorance or neglect of what deserves serious notice? Of all places in Britain, perhaps, Edinburgh has most cause to understand the practical value of 'due advisement,' ere commencing public works; and has had occasion to experience that Acts of Parliament authorizing them do not necessarily imply, far less guarantee, perfect exemption from regret that they have ever been undertaken.

"Permit me, before closing, to make a single remark on a passage in an article respecting Mr. Cubitt's plan which appeared in the London Courier of the 15th instant. The writer, evidently a friend of that gentleman, and as evidently in his confidence, after various observations, in reply to strictures, proceeds thus: 'It is also said, that Mr. C.'s plan is very similar to that proposed by Mr. James Anderson, civil engineer in Edinburgh, who is, we believe, a very intelligent and skilful professional gentleman. This is very possible, and in no degree disparages the plan of Mr. Cubitt, who, however, it is known to us, never saw Mr. Anderson, nor made any use of his plans.' Granted, Sir, most readily, the possibility, nay, the certainty, could this be made out, of thorough or considerable similarity would be no disparagement; granted, also, that the two projectors never once came personally into contact, for reasons which they can best explain; and granted, in the last place, that Mr. C. made no use of Mr. A.'s plans;—may I, notwithstanding, be bold enough to imagine that a theory, which at once accounts for non-acknowledgment, for coincidence, for unlikeness, for even unwillingness to be profited by previous labours—in short, for every peculiarity in the entire case—must be dissolved and annihilated, if dissolved and annihilated at all, by something more cogent than such a defence?

"I am, Sir, your very obedient servant,
"*D. E.*"

Appendix, No 4,
Report of
J. Anderson, Esq.

To its contents I must now add what has since come to my knowledge as to Mr. Cubitt's not having made any use, as has been stated, of my plan. In the Appendix, No. 1, of the Report by Mr. Cubitt, (not given in the copy printed at Leith,) there are actually two entries in these words:

"'3. Plan and Sketch of a proposed Low-water Pier and Floating Basin for steam-vessels at Newhaven, and a communicating Ship Canal to Leith Wet Docks, by James Anderson, 1834.'

"'4. Plan and Ground between Wardie and Newhaven, with a projected Low-water Pier and Wet Docks at Trinity, by James Anderson, 1833.'

"Having this evidence of my plan being in his possession, the public, I may be allowed to presume, will be at no loss eventually either to perceive the resemblance between the plans themselves, or to award any portion of merit respectively due to their authors. I shall only say, that with this hint before him, every intelligent reader must perceive the speciality of my plan to have been but incidentally and vaguely passed over in Mr. Cubitt's Report, (p. 178,) where allusion is made to a ship canal, &c.

"I am, Sir, your most obedient,
"*James Anderson.*"

Hitherto, as the reader will have seen, I have refrained, except in one instance, from quoting any commendatory or comparative notices of my plan which appeared in the journals at different periods. Possibly, however, I should be justly chargeable with ingratitude, were I altogether to exclude them from this Report. The following, accordingly, are offered with due respect as specimens, but without comment on my part, or a desire, if this could be fulfilled, to foreclose the more deliberate judgment which has still to be pronounced.* Thus,

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* *From the Edinburgh Advertiser, 10th October* 1834.

"In our last paper we copied from the London Courier part of Mr. Cubitt's Report, without any comment. Upon considering the subject thus far, however, it appears to us to be very similar to what was proposed by our townsman, Mr. James Anderson, civil engineer, whose plan, after having been laid before the Commissioners for the Affairs of the City of Edinburgh, was submitted in April last to Lord Melville, with whom Mr. A. had some correspondence. That gentleman's Sketch-plan and Report were subsequently transmitted to Government through an official channel. Whether they were, with other documents, laid before Mr. Cubitt, we do not yet know; neither can we say whether or not they are mentioned in the Appendix to his Report. But, believing Mr. Anderson's plan to have been the only one that was devised, previously to Mr. Cubitt's, for rendering available the docks and harbour at Leith, and presuming that many may not be aware of its existence, we shall endeavour briefly, and so far as our recollection goes, to explain it.

"In the first place, then, Mr. Anderson proposed to run out, at about one hundred yards west of Newhaven Pier, in the direction of the new approach to Edinburgh, a low-water pier of peculiar form, and to the depth of ten or twelve feet of low water at stream-tides. Secondly, from this pier to the bastion-wall at the western wet dock, he proposed to construct a strong rubble sea-wall or bulwark, and to excavate a channel or ship-canal, from ten to twelve feet below low-water of spring-tides, and of dimensions sufficient for two vessels of the largest class to pass. This, even at low ebb-tides, would have afforded, according to him, twenty-four feet depth of water; and, in ordinary spring-tides, thirty feet, with an entrance lock or gate into the western wet dock. Mr. A. estimated the expense of these works at 100,000 *l.* But, farther, he exhibited in his sketch a basin for steam-vessels, close in shore, should this be required, and which he estimated at 20,000 *l.*; while, in the event of a western breakwater being needed, or works of a similar kind, the additional cost would be 30,000 *l.* Thus, his total estimate was 150,000 *l.* He anticipated, however, that it would not be necessary to construct works to a greater extent than 120,000 *l.* in order to render Leith docks available as a low-water harbour.

"So far, therefore, if we be correct, the only difference between Mr. Anderson's plan and Mr. Cubitt's is, that the former makes the entrance to the west of Newhaven Pier, and the latter to the east of it. Mr. Anderson's reason for having his entrance to the west of Newhaven Pier was, that he thereby obtained twelve feet depth of water at 800 feet nearer the shore than at any other point between it and Leith docks. Besides, to the west of that pier, the tideway is clear of all sand-banks and foul ground, so that there would be no danger of silting up; whereas, in the line of Newhaven Pier, the ground is both rocky and foul, and to the east consists principally of sand-banks, which run far to seaward, even beyond the Martello Tower, and, in consequence of which, any works that could be constructed would be liable to accumulation of sand in the channels. In fact, the only fault found to Mr. Rennie's plan was his having the entrance to the east of Newhaven Pier, instead of the west; and Mr. Cubitt, as we apprehend, seems to have fallen into the same error.

"Since Mr. Anderson first submitted his views, we understand he has prepared a proper and finished plan, which would have been published before now had not Government appointed Mr. Cubitt to report generally on the subject. We would advise him to give it to the public without delay, so that all may judge of its intrinsic merit, and how far it corresponds with Mr. Cubitt's suggestions."

Letter to the Editor of the Courant, 24th October 1834.

"Sir,—Having seen Mr. Cubitt's plan and report for improving Leith Harbour, and after having given it due consideration, I am of opinion that what Mr. Cubitt proposes will not effect the end desired, viz. to render Leith Docks available as a low-water harbour. Mr. Cubitt's proposed works extend 1,200 feet beyond Newhaven Pier, one point east of north; at which he proposes the entrance of his channels, and where he expects to find twelve feet depth of water at low-water, spring-tides; but upon examining Messrs. Dall and Leslie's chart of the soundings, it will be seen that he would require to extend his works 1,600 feet further seaward than what he proposes in order to find that depth; and not only so, but so very shallow is the ground where his proposed works terminate, that instead of 1,200 feet, he would require to extend them 1,900 feet, to obtain ten feet depth of water at low-water

Thus, then, it may be allowed me to hope I have shown reason for a preface of a kind and length not very usual, and, assuredly, not often justifiable in a Report professedly occupied with matter which, aside from all personal considerations, has claims to the most serious regard. Every reader must have perceived, nevertheless, that in the attempt either to vindicate the merits of my own plan, or to account for its tardy appearance, I have by no means lost sight of the main object itself. On the contrary, indeed, he has been thus gradually

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low-water of stream-tides; and of this any one may satisfy themselves by examination of the above-mentioned chart of the soundings.

"I would therefore beg to call the attention of the public to a plan for the improvement of Leith Harbour and Docks, which I have repeatedly seen. This plan was designed by our townsman, Mr. James Anderson, civil engineer, some time ago. I know that in April last it was submitted to several influential individuals and professional men, whose approbation it has universally received, both before and since the publication of Mr. Cubitt's plan, and I would entreat the public to examine it before they come to any decision with regard to the best mode of improving the harbour and docks of Leith.

"I believe that Mr. Anderson will be happy to show this plan to any persons who may feel an interest in the subject.

"I am, Sir, your most obedient servant,
"*R. N.*"

From the Edinburgh Advertiser, 4th November 1834.

"Having already on one or two occasions alluded to Mr. Anderson's plan, respecting the contemplated improvements of Leith Harbour, we readily give insertion to the following letters, in which the author enters into a fuller detail than we had it in our power to communicate. The principle of Mr. Anderson's plan is essentially the same with that of Mr. Cubitt; but the former differs from the latter in a most important point, viz. the position of the low-water pier, which Mr. Cubitt proposes to excavate on the east side of the Newhaven stone-pier; that is on foul ground; while Mr. Anderson fixes on the west side, where the ground is clean, and low water can be had a great many feet nearer the shore. On the whole, we consider Mr. Anderson's plan as decidedly the most practicable, and this we understand to be the opinion of every intelligent person that has examined it. The London Courier stated that Mr. Cubitt had never seen Mr. Anderson, nor made any use of his plan; but this must have been said either in ignorance of the fact, or with a view to mislead its readers and the public, as that gentleman specially mentions Mr. Anderson's plan in his appendix, although it does not appear in the copy printed at Leith. That Mr. Cubitt did make use of the plan in question, there can be very little doubt; and it would certainly have been more creditable for him to have candidly admitted it, or adopted the entire plan instead of offering one of his own as original. Mr. Anderson, we observe, is preparing to publish his plan,—and this we deem merely an act of justice to himself,—so that the public will have an opportunity of awarding to these rival engineers their respective shares of merit and originality."

From the Scotsman, 5th November 1834.

"We have only seen Mr. Anderson's plan for a low-water harbour at Newhaven within these few days. It is extremely similar to Mr. Cubitt's, and as the latter had it in his possession when he drew up his own plan, he should perhaps have alluded to it, in justice to its author. Mr. Anderson places the entrance to the harbour some hundred feet further west than Mr. Cubitt, at a point where the deep water is some hundred feet nearer the shore. Like Mr. Cubitt, he makes a deep channel, 200 feet wide, along the line of the beach from the present docks west to Newhaven; but he proposes a stone quay instead of Mr. Cubitt's wooden wharfs, on the land side; further, he places his sea wall or breakwater parallel to the quay, at the distance of about 300 feet, and by making an entry, with a gate, through the present Newhaven Pier, he converts the deep channel into a wet dock. As Mr. Anderson intends to publish his plan, we shall not enter further into detail, but we recommend it to public attention. It would be presumptuous in an unprofessional person to decide upon the comparative merits of the two plans; but after an examination of Mr. Anderson's, we have no hesitation in saying, that while extremely near Mr. Cubitt's in principle, and in the author's opinion not more expensive, it possesses some striking peculiar advantages, which well entitle it to the careful consideration of the Harbour Commissioners, or other parties by whose opinions the nature of the work to be erected may be determined."

From the Caledonian Mercury, 6th November 1834.

"Three columns of this day's paper, devoted to discussions on Leith Harbour and Mr. Cubitt's Report, mark the interest taken by the public in these subjects. Neither Mr. C. nor his Report are handled with much ceremony; and should the Committee appointed by the steam-ship shareholders report in favour of Granton or Trinity, Government will only see more plainly the urgent necessity of taking prompt and speedy measures to prevent these antagonist havens from ruining the port and trade of Leith. As to the weighty infractions of arithmetic rule charged against Mr Cubitt, that gentleman will doubtless be able to defend his own plans and suggestions. The letter which Mr. Anderson has done us the honour to address to ourselves, mentions that Mr. Cubitt has borrowed from his sketch of a harbour more than has been acknowledged. Having inspected Mr. Anderson's drawings, we have no hesitation in saying, so far as our judgment may be presumed competent, that that gentleman's proposal appears highly ingenious; but whether it is better than Mr. Cubitt's, is really a point on which no unprofessional person can be expected to hazard an opinion; and as to borrowing, it occurs to us that Mr. Cubitt's harbour resembles Mr. Rennie's most, whence the inference, that if Mr. C. availed himself of any hint at all, that hint was taken from Mr. Rennie's plan rather than from any other."

Note.—The Editor here is in a mistake. The plan of Mr. Cubitt bears no relation to that of Mr. Rennie, farther than that the entrances of both are placed to the east of Newhaven Pier: it is the principle on which the plans are founded that is in question, not the site of the entrances. *See* p. 199.

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dually prepared with a basis on which to rest his conviction that this object is as desirable as it may be difficult of attainment; while, in the information already conveyed, he has been furnished with some of the elements essential to a decision on its practicability.

REPORT.

Present state and defects of Leith Harbour.

It is matter of public notoriety that the port of Leith, with its excellent wet docks, which are of the best construction, and upon which so much has been expended, can never, from its present entrance, be more than merely a tidal harbour. The situation of the pier, and natural causes, combine to preclude the possibility of its ever being made a low-water harbour by the present channel. It may indeed be possible, at an enormous expense, to extend the pier seaward to the deep channel of the Forth; but no artificial means can overcome the natural obstacles, either by deepening the channel of the River Leith along the pier, or keeping its course free. The immense shoal of sand, which extends over a space of nearly five miles, from Newhaven Pier to the east of Portobello, and reaches seaward beyond the Martello Tower, is continually shifting, and would soon fill up any excavation of the channel of the River Leith. That river itself, besides, in time of floods, continually brings down a great quantity of alluvial soil, which accumulates and is deposited at its junction with the waters of the Frith, thus forming a bar across the channel and fairway of the harbour, which it is impossible for any works of art to prevent or remove.

But suppose that even a cauld and reservoir were constructed immediately above the harbour, which the situation of Leith Mills prevents, or were they even formed higher up the river at its source beyond all the mills, with the view of containing a large body of water, occasionally to clear out the channel at low water, yet this measure would be ineffectual, as it would only tend to remove the bar a little farther seaward, without increasing the depth of the channel; for the bar will always form at the place where the influence or force of the river and tide becomes equal, thereby causing a stagnation and deposition of the silt which is mixed with their waters.

The late Sir John Rennie was quite aware of the disadvantages under which the port of Leith laboured from its present entrance, and of the great benefit likely to result were a proper western entrance obtained. Indeed, in one of his early reports on Leith Harbour, after mentioning that there is, at the old drawbridge, about 12 or 13 feet water at spring-tides, he says, "The sand-banks commencing to the eastward of Newhaven, and continuing in that direction beyond the entrance of Leith Harbour, are varied and enlarged by the north and north-east winds, the former meeting the river and returning tide directly in the face, and the latter bringing sand from the eastward through the opening between the Beacon Rocks and the Black Rocks. Had this latter chain been continued, the bar or entrance would have been more sheltered, and of course it would have suffered less from that quarter. Nothing, therefore, very great in the way of deepening can be done. The best way of effecting this would be to extend the pier seawards; but this would be attended with very great expense." And again, he says, in regard to a certain operation for deepening the channel, "It would only drive the bar farther seaward, without materially increasing its depth. The fact is, the tide ebbs too far beyond the point of the pier; and it is useless to deepen the mouth of the harbour, while between it and the sea is a shallow bar. The expense of extending the pier would be very great; and, when so done, I do not apprehend that more than three feet, or at most four feet, additional depth of water could be got. A question therefore arises, whether it would not be better to look out for another entrance with more depth of water, and where the depth could be maintained at a reasonable expense, than to be at the expense of lengthening the east pier." Mr. Chapman, again, in whose opinion touching these imperfections I thoroughly concurred, seemed to me to have exercised all his ingenuity without the possibility of any other than very transient benefit. Nothing could be more evident to me indeed than the certainty of continued defect and irremediable loss, whatever expense or labour was elsewhere directed, should an addition of this kind be withheld. No less clear was my conviction, that were money laid out to any attainable amount whatever, in improvements of a similar description, or in the same quarter, the necessity for more would perpetually recur, while the good realized as perpetually vanished.*

Steam Navigation.

This admitted condition of Leith Harbour is more than ever to be regretted, steam navigation having become of such vast importance, that it may justly be called the mainspring of commerce, while it is pre-eminently superior to every other mode of transit. It is a fact, notwithstanding, that except at very high tides, seldom or never can any of the steam-ships

* Since so much has been done, by no means with commensurate benefit, for the present entrance to Leith Harbour, which, I am well aware, will and must be used by a considerable number of the vessels trading to the port, I am of opinion there would be some justice in extending the weir to the Martello Tower, with a view to confining both the flowing and receding tides to the fairway of the channel. This, however, ought to be effected at the least possible expense, as, after all, it can be considered no other than a minor expedient, absolutely incapable of fulfilling the purpose contemplated in a great harbour. It would indubitably render the present works more available than they now are or can be without such addition.

steam-ships enter this, the port of the capital of Scotland. Indeed the greater number of the steam-vessels in the London trade, and frequently those employed in the ferries, and otherwise in the navigation of the Forth, are obliged to cast anchor at a great distance off shore, and in that situation, by means of small open boats, in all weathers, embark and disembark passengers, to their great annoyance and danger, besides having to ship and reland heavy goods and luggage, which is both difficult and expensive, and, as occasionally happens during stormy weather, cut off from all communication with the shore.

Immediate and ample accommodation for the steam-trade is therefore imperiously called for, in order to prevent its being transferred to other ports, whereby not only Leith would be entirely ruined, but the interests which both Government and the city of Edinburgh hold in the harbour and docks would for ever be lost, as assuredly will be the case, should accommodation be provided for the trade elsewhere.

Objects of the plan.

The main object of my plan, and of this Report, is to supply an adequate remedy for such existing and threatened evils; in other words, it is, in the first place, to improve the port of Leith itself, by giving it a deep-water entrance from Newhaven, and thereby converting it into a low-water harbour. Secondly, It is to afford accommodation for steam-vessels, and the trade in general, by admitting foreign and other vessels of greater burden than have hitherto entered the port of Leith. Thirdly, It is to supply suitable provision for the Fife and Mid-Lothian Ferries, which is very deficient on both sides of the Forth. And, lastly, to give shelter at all times to all classes of His Majesty's navy, and which no plan hitherto proposed for the improvement of Leith Harbour could afford.

Site of the proposed works.

I shall now speak of the advantages of the situation of the proposed works. The shore immediately to the west of Newhaven Pier is superior and pre-eminently better adapted for a low-water pier than any other spot in the vicinity of the port of Leith, there being not only the necessary depth of water closer in shore, but the channel, which consists of a hard blue clay, being free of all foul ground and sand-banks, consequently affording an excellent foundation for the construction of sea-works. At 300 yards west of the line of Newhaven Pier, and 400 yards seaward of low-water mark, 10 feet depth of water is found at the lowest ebb of stream-tides; whereas, in the direct line of Newhaven Pier, where the ground is both rocky and foul, the same depth of water cannot be found nearer than 600 feet farther seaward, or 600 yards from low-water mark. Farther to the eastward, the distance at which 10 feet depth of water can be obtained is still greater. About 300 yards to the east of the line of Newhaven Pier, and nearly opposite the seaward termination of Mr. Cubitt's proposed works, the distance is 650 yards; and 300 yards still farther to the east, the distance is not less than 800 yards. In short, the whole space betwixt Newhaven Pier and the Martello Tower consists of shallow ground and sand-banks, while the foundation of the tower itself is actually quite dry at low-water of stream-tides.

Most evidently and decidedly, therefore, any works, either in the line of Newhaven Pier, or other place to the eastward thereof, intended for the improvement of Leith Harbour, whatever may be their construction, would be of minor utility; and, most assuredly, any money expended thereon could never be productive of corresponding and permanent benefit.

The late Sir John Rennie's plan.

It is generally understood that the late Sir John Rennie considered his having placed Newhaven Pier in its present site as a failure, the ground being shallow, rocky and foul beyond its termination. I have delineated the western entrance proposed by him on the annexed plan; from which it will be seen that he did not intend to convert Leith into a low-water harbour, but only to obtain a few feet of more depth at high water than the present entrance could afford; and, indeed, the objection generally made to his proposal was his having placed the entrance to the east of Newhaven Pier, instead of to the west.

Plan contrasted with that of Mr. Cubitt.

The plan by Mr. Cubitt is founded on the same principle as the one suggested by me in April last, and now treated of in this Report, namely, to afford Leith a deep entrance at low water of stream-tides, by means of carrying piers and breakwaters into the deep channel, so far as this can be accomplished.

I choose for the site of my entrance a portion of the channel about 300 yards to the west of the line of Newhaven Pier, for the best of reasons, namely, both on account of deep water being nearer the shore, and the channel free from all foul ground. The pier and breakwater I propose to be of substantial stone work, filled up with stone packing; and my channel or communication along the line of the beach to the wet docks of Leith is intended to be a wet dock or ship canal 200 feet wide, with flood-gates, substantial sea-defences and a stone quay along the whole extent. This canal would contain 30 feet depth of water at the height of spring-tides, and this depth, which could also be had at low water by simply shutting the flood-gates, would be sufficient to float any of His Majesty's navy. Mr. Cubitt, on the other hand, fixes for the site of his entrance on a portion of the channel at nearly a correspondent distance east of the line of Newhaven Pier. He describes his works thus: "The project is simply this: to include all the space between the western dock and Newhaven Pier with dry rubble-stone breakwaters or piers, as shown in the plans, with an entrance between them at a depth of 12 feet low water spring-tides, and within the space thus included to excavate and dredge out a channel from 12 to 15 feet deep below low water." He describes his communication, or main channel along the beach, to be also 200 feet wide, but open, sloped and cased with stone on the land side, on which he proposes to erect wooden wharfs; and, consequently, it would only be at high water that the necessary depth could be had in his channels. Now, to find at his entrance a depth of 12 feet at low water of spring-tides is completely out of the question, for the seaward termination of his western breakwater is distant about 700 feet from even 10 feet, and not less than 1,700 feet distant from

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from where 12 feet depth can be found at low water of spring-tides. (*See* the lines of 10 and 12 feet soundings on the plan; and, for further confirmation of these remarks, I refer to Messrs. Dall and Leslie's chart.)

Again, Mr. Cubitt's breakwaters, from the manner in which he proposes to construct them, and fill up their nuclei with the clay or material excavated out of his channels, I have no hesitation in pronouncing to be impracticable; and I am confirmed in this opinion, not only by my own experience and observations in regard to various sea-works, but by all other professional and practical men with whom I have conversed on the subject.

Tides, winds and currents of the Forth.

In the preliminary part of this Report I have already alluded to the various opportunities I have had in making observations on the tides, winds and currents, as well as the soundings in this quarter of the Frith; and my attention was particularly directed to the investigation of these points upon one of the occasions mentioned, namely, at the time I planned the sea-works for the approach to Newhaven Pier in 1824, and which arose from the following circumstance:

On taking the various levels in order to connect that work with the pier, I found that at 200 feet north of the shore or landward end, the channel on the eastern side of the pier was three feet above the level of that on the opposite or western side. This difference of level must evidently have been caused by the action of the sea, notwithstanding the square head of the pier, which, from its peculiar form, would to an observer appear rather to encourage the lodgment of silt, and filling up of the channel, than to admit either of its being deepened or of the hard substance washing away. Upon investigation, I found that this part of the pier had originally been founded three feet under the surface of the channel into the hard clay, but, by the continued action of the receding tide, the channel had been deepened, and the stone foundation of the pier, for 100 feet in length, was actually undermined, and considerably above the level of the channel. In consequence of this, the foundation had to be underbuilt.

The result of my observations was, that, on account of the position of the promontory of North Berwick, the bulk of the waters at the mouth of the Frith is influenced so as to be directed to wash more in upon the northern than the southern side of the Forth; and, consequently, the making or flowing tide sets in very close along the north shore, more especially at Kinghornness, and along to the promontory west of Aberdour, and north of Inchcolm; the current thence flows in a south-westerly direction through the gut betwixt Inchgarvie and North Queensferry.* In like manner, the breadth of waters in Inverkeithing Bay, and to the westward, is influenced by the projecting promontory of North Queensferry, which causes the receding tide to rush through the strait or gut already mentioned, directing the bulk of the current to pass through betwixt Cramond and Mickery Islands, thence setting in close upon the south shore at Granton, and along to Newhaven Pier, upon which it strikes with considerable force; and the current has consequently not only deepened the channel immediately on the western side of the pier, but farther out, at the site of the termination of the proposed pier, where deep water is found nearest the shore. The current of the tide, being thus intercepted by Newhaven Pier, and the Bush Rocks and rocky ground immediately to the north of the pier, runs in a north-easterly course in the direction of Inchkeith, on the north of which island the bulk of the current flows. It appears, therefore, that, betwixt the rocky ground north of Newhaven Pier to the Martello Tower, the whole space within that line and the shore is formed into an eddy, which is partly the cause of the sand-banks, and the continuance of which must necessarily render effectual improvement in that situation absolutely impossible. The course of the current at Newhaven Pier will be better understood by looking at the dotted lines of 10 and 12 feet soundings on the plan.

The position and construction of my proposed pier and breakwater are such as would shelter the harbour not only from the prevailing east and north-east winds, and the swell of the waters from the German Ocean, but also from the western gales. A vessel, for instance, driving before an east wind, could swing round and fall into the lee, on the western side of the pier, which projects about 600 feet beyond the head of the breakwater; and, in a westerly gale, the course would be quite clear, for no vessel, making her way to the harbour, could possibly escape its entrance. But in gales from the east or west, or indeed from any point of the compass, vessels could never find admission into a harbour, the entrance to which was in the form of a bottle mouth (such as Mr. Cubitt's). The breakwater, while it would afford shelter from the westerly gales, is so constructed, by having a clear arched water-way of 200 feet through it, that the receding tide, which has been already described as setting close in along the southern shore, would not be obstructed, but would, along with the breadth of water contained in the habour, rush out at the entrance channel, thereby officiating as a self-acting agent, and preventing the lodgement of sand or silt. The head of water which the proposed canal or wet dock would contain, viz. 20 feet above low water of spring-tides, could also be employed to clear out the channel, if necessary, by opening the flood-gates an hour before low water, so that there would be no difficulty in keeping the channel clear, without the aid of dredging-machines or otherwise.

* See my Report and Design for a Suspension Bridge at Queensferry, published in 1818, the surveys, soundings, &c. &c. pertaining to which were taken in the preceding year.

General Description of the Proposed Works.

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It will have been observed, from my letter addressed to the Honourable Commissioners for the Affairs of the City of Edinburgh, that the works exhibited on the finished plan, which I had prepared immediately after the Sketch Plan and Report had been submitted to them in April, were greatly simplified; and that my estimate was consequently considerably reduced.

The pier, which I propose to be 60 feet in breath, and the outer walls of hewn stone of peculiar construction, secured with cast and malleable iron-work, &c. runs out into the channel from the western point or head of Newhaven Pier, 35 degrees west of north, to 10 feet depth of water at the lowest ebb of spring-tides. The depth is found here at 400 yards seaward of low-water mark. The pier, on the western side of its defence-wall, is intended for high-water, and the eastern side for low-water; and the pier-head ought to be surmounted with a lighthouse, for the purpose of guiding vessels into the harbour. The breakwater, again, from a point at high-water mark, nearly 500 yards west of Newhaven Pier, runs out one point east of north to the site of its head, which is also to be built of hewn stone, and to terminate at a point about 200 yards within the head of the pier, leaving an entrance channel of 200 feet in width. This channel I propose to excavate 10 feet below low-water spring-tides, or on a level with the site of the pier-head. The breakwater is to be cased with stone on end, having an arched water-way of 200 feet through it, for the receding tide to pass, as already referred to; and the interiors or nuclei of both the pier and breakwater are to be filled up with stone packing.

I may here add, that this portion of the proposed works, the expense of which is estimated at 63,138 *l.* 6*s.* 6*d.* sterling, but say, with contingencies, &c. &c. 70,000 *l.*, might, if considered advisable, be executed in the meantime, (exclusively of the sea-lock, flood-gates, ship-canal and other works to the eastward,) and would form a floating harbour for steam-vessels, by excavating the remainder of the channel betwixt the proposed entrance and breakwater; and while it would give immediate accommodation to the steam-trade, the latter portion of the works could be executed at a future period. But I do by no means recommend this delay, and merely throw out the hint in the event of there being difficulty in obtaining money for the whole works, as I would decidedly advise the whole to be done at the same time, for many considerations; namely, 1st, In point of economy; 2dly, In justice to the works themselves, that they may not be broken up and disturbed after being completed; and, 3dly, Because the simultaneous entire completion of them would be of essential importance to the trade and port of Leith.

The connexion between the pier and wet dock or ship canal is by means of a sea-lock, 170 feet long by 60 feet broad, and the flood-gates of which can be kept open or shut at pleasure. I propose the wet dock or ship canal to be 200 feet wide at top, and the channel 150 feet, and excavated 10 feet below low water of stream-tides, or on a level with the entrance channel. The land side is to have a wharf or quay stone-wall, built of large square rubble, hammer-dressed, scarped and nidged; and the bank on the off side to be sloped and defended from the wash of the water, partly by a dwarf retaining-wall, and partly by stone casing, with a breadth of banking 100 feet at top, betwixt the canal and sea defences.

For these defences, I propose a bulwark and sea-wall, on the same principle as that adopted in the work which I designed and executed for the proprietor of Wardie, namely, to excavate the channel to such a depth as that the top of the bulwark foundation-stones, which I propose to be of considerable length, and placed in a vertical position, shall be below the level of low-water mark; the surface of the bulwark forming an inverted or catanarian arch, with the stones all placed vertically on end. Betwixt the canal bank and bulwark, I propose to erect a strong rough dry rubble-stone wall, and the void betwixt and under the bulwark to be made up with dry stone packing; the whole to be connected as shown in the Section, and surmounted with a wall of large sized square rubble in courses, hammer-dressed, scarped and nidged, and covered with a broad deep stone-coping.* This form and construction of bulwark is, in my judgment, better adapted for a sea defence than any other form hitherto devised. The concavity of its surface is more in accordance with the sweep of the natural channel than either a convex or straight surface can be. It gives less resistance to the waves, while it becomes more secure in proportion to the weight by which it is surmounted, provided all voids below are made hard up and sufficient. These defences, which, for such and other reasons, I prefer to a hewn stone-wall, can be executed at very moderate expense. The proposed entrance to the western wet dock I also intend to be 60 feet in width, so that the largest steam-ships may enter. The entrance to the dock is to have also a flood-gate, for the purpose of confining the water therein, when the sea flood-gates are opened in order to the clearing out the channel, or otherwise. This will make the communication with the harbour of Leith entirely complete. I also propose to form a road-way from Newhaven along the line of the wharf or quay wall to the Leith docks and warehouses.

The cost of the whole of these works I estimate at 124,695 *l.* 11 *s.* sterling.

This amount, although considerable, is not at all to be compared with the vast importance of

* The works of the wet dock or ship canal can be executed at very moderate expense, as they are all above low-water mark; besides, after the bulwark and sea-wall are built, the other parts of the works can be done at all times.

Appendix, No. 4.
Report of *J. Anderson*, Esq.

of the measure, and the advantages that will necessarily arise from it; and, if I might be permitted to express an opinion, I would say, that, were the plan I proposed carried into effect, it would render Leith, from being one of the worst, one of the best harbours in Great Britain.

The site selected for it could not be better in point of access, the principal part of the works being in the direction, and at the very commencement, of the new approach to Edinburgh, which, when completed, will not only be the nearest, but the most level, and consequently the best line of road to the city; while, if a corresponding provision were made on the north shore for the Fife and Mid-Lothian Ferries, it would not only be a great boon conferred on the north of Scotland, but likewise considerably enhance the property in the county of Fife, which would have thus at all times a ready communication with the capital.

I need hardly remark, in addition, that the Government and private property lying in the immediate vicinity of the projected works would be materially improved in value.

In regard to the time required for completion, my impression is, that were the works begun early next spring, they might be finished in the autumn of 1836, two summers being sufficient for the purpose.

Such then are my views and sentiments regarding the mode of connecting the port of Leith with an entrance from the west. Should they not be carried substantially into effect, I have not a doubt that a rival harbour will be provided elsewhere, and, in my judgment, the site of this will most probably be Granton, as, among other reasons, it is free from the shore-dues exacted by Edinburgh. On the other hand, if the works now proposed were immediately carried into effect, the advantages both to the city of Edinburgh and to Leith would be incalculable. In reality I am of opinion that were a modification of its existing rights conceded, the former would eventually be retrieved from embarrassments, while the latter would soon rank among the first commercial ports of the empire.

Edinburgh, 6 Nov. 1834. *James Anderson.*

APPENDIX.

HAVING observed, after the completion of the annexed Estimate, that the expense of the carriage of stone was actually greater than that of the material itself, I considered it advisable to address the following letter to Mr. Johnston, Craigleith Quarry, (who had previously furnished me with the data upon which I founded my prices of the masonry,) with a view to ascertain the saving which might be effected by the mode suggested. His answer will show the result.

"Dear Sir, "Shandwick-place, 8 Nov. 1834.

"In reference to your offer addressed to me to furnish stone from Craigleith Quarry for the works by which I propose to improve Leith Harbour, you make the usual charge for carriage by the common road. Now I beg to know, were permission obtained, by Act of Parliament or otherwise, to lay a railway along the public road to the proposed works, at what rate per ton you would deliver the stone (carriage only); or, in other words, what would be the amount of saving effected by such a measure, including the expense of laying the railway? There would be required about 50,000 tons of stone, each stone upwards of two tons in weight (the carriage for such in your offer is 3*s.* per ton); 130,000 tons of stone under that weight (at 2*s.* per ton carriage); and say 125,000 tons of packing (at 1*s.* 6*d.* per ton carriage). An early answer will oblige,

"Yours, &c.

"George Johnston, Esq., (signed) "*James Anderson.*"
"Craigleith Quarry."

"Dear Sir, "Craigleith Quarry, 12 Nov. 1834.

"In answer to your letter of 8th inst., I beg to say, that were permission obtained, by Act of Parliament or otherwise, to lay and use a railway along the public road to the proposed works for the improvement of Leith Harbour, the amount of saving in the expense of carriage of the stone required would be very considerable. The quantity of stone you require of different sizes amounts to 305,000 tons, the carriage of which, at the rates mentioned in my former offer, is - - - - - - - - - - - - £. 29,875 - -

But if the free use of a railway were obtained, the carriage of that quantity of stone could be done at 1*s.* per ton on an average; say 305,000 tons, at 1*s.* per ton, is - - - - -	£. 15,250 - -	
And I could undertake to provide and lay the rails for the sum of - - - - - - - - -	2,000 - -	
		17,250 - -
In this way a saving would be effected upon the carriage of the stone to the amount of - - - - - - - - - -		£. 12,625 - -

"I am, &c.

"James Anderson, Esq. "*George Johnston*, Jun."
"Civil Engineer, Edinburgh."

Appendix, No. 4.

Report of *J. Anderson*, Esq.

ESTIMATE for constructing a DEEP-WATER ENTRANCE at *Newhaven*, and a WET DOCK or SHIP-CANAL, &c. &c. communicating with the Western Wet Dock of *Leith Harbour*.

Excavation of Entrance Channel, &c. 200 Feet wide, 0 at the Pier-head, 10 Feet at Low-water Mark.

		£.	s.	d.	£.	s.	d.
46,750	Cubical yards in entrance channel, at 3*s.* -	7,012	10	–			
24,800	Ditto above low-water mark, and in the site of sea-lock, and in the found of landward walls of pier, at 1*s.* - - - - - -	1,240	–	–			
					8,252	10	–
	Low-water Pier.						
6,011	Cubical yards of masonry in walls of pier, deep-water founding, at 40*s.* - - - -	12,022	–	–			
17,280	Ditto in pier walls, above low water of medium tides, at 20*s.* - - - - - -	17,280	–	–			
4,080	Ditto in landward walls of pier, one-half old and one-half new material, at 15*s.* - -	3,060	–	–			
60,480	Ditto of stone packing in interior or nucleus of pier, at 3*s.* - - - - -	9,072	–	–			
					41,434	–	–
	Breakwater.						
280	Cubical yards of masonry in the walls of the breakwater head, deep-water founding, at 40*s.* - - - - - - - -	£. 560	s. –	d. –			
685	Ditto, ditto, above low-water, at 20*s.* - -	685	–	–			
2,208	Ditto dressed square, large-sized rubble in piers, and arching to admit the receding tide, measurement and half, at 10*s.* - -	1,104	–	–			
10,575	Square yards of stone casing in breakwater, at 7*s.* 6*d.* - - - - - - -	3,965	12	6			
23,748	Cubical yards of stone packing in ditto, at 3*s.*	3,562	4	–			
					9,876	16	6
10,540	Superficial yards of causeway on pier, and head of breakwater, &c. &c. at 5*s.* - - -	2,635	–	–			
					2,635	–	–
45	Tons cast-iron feather bars for connecting masonry in deep-water founding, at 8*l.* - -	360	–	–			
4	Tons of malleable iron bars, bolts, clamps, &c. for connecting the masonry at the extremities of pier, breakwater, and centre or defence wall of pier, at 20*l.* - - -	80	–	–			
	Cast-iron lighthouse on basement of stone -	500	–	–			
					940	–	–
	Sea Lock and Flood-gates.						
4,800	Cubical yards of masonry in chamber of lock, at 30*s.* - - - - - - - -	7,200	–	–			
	Puddling, &c. &c. - - - - -	250	–	–			
2,300	Square yards of arching in chamber, and the sills of flood-gates, at 15*s.* - - -	1,725	–	–			
	Two flood-gates, wood and iron-work, complete, at 1,500*l.* each - - - - -	3,000	–	–			
	Drawbridge - - - - - - -	750	–	–			
					12,925	–	–
	Works of Wet Dock or Ship Canal.						
5,300	Cubical yards of excavation in found of bulwark, at 1*s.* - - - - - - -	265	–	–			
280,800	Ditto in canal, &c. at 6*d.* - - - -	7,020	–	–			
	Puddling and forming slope - - - -	1,080	–	–			
		£. 8,365	–	–			
12,720	Square yards of bulwark, constructed of the best materials found, betwixt high and low-water mark, workmanship only, at 3*s.* 6*d.*	2,226	–	–			
2,120	Ditto particular dressed bulwark of Craigleith stone, at junction with retaining wall, at 7*s.* 6*d.* - - - - - - - -	795	–	–			

(*continued*)

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Report of *J. Anderson*, Esq.

		£.	s.	d.	£.	s.	d.
10,600	Cubical yards of rough dry rubble wall at back of bulwark, at 6*s.* 6*d.*	3,445	–	–			
5,300	Ditto in wall surmounting bulwark, of large-sized square rubble, in courses, hammer-dressed, scarped, and nidged, at 10*s.*	2,650	–	–			
1,090	Lineal yards of dwarf retaining wall, including cope, at 12*s.* 6*d.*	681	5	–			
4,240	Superficial yards of stone casing, for securing top of slope on north bank of canal, at 5*s.*	1,060	–	–			
1,800	Cubical yards of masonry in wing retaining walls, on slope at entrance gates of canal, at 9*s.*	810	–	–			
25,920	Ditto in wharf or quay wall, of large-sized, square rubble, dressed, &c. &c. in courses, at 9*s.*	11,664	–	–			
					31,696	5	–

Entrance to the Western Wet Dock.

Pulling down and rebuilding part of the Return of Bastion Wall.

		£.	s.	d.	£.	s.	d.
1,000	Cubical yards of masonry, to join retaining and parapet walls of canal, lime-mortar and workmanship only, at 5*s.*	250	–	–			
1,400	Ditto in entrance walls to wet dock, at 30*s.*	2,100	–	–			
400	Square yards in sill of entrance, at 10*s.*	200	–	–			
	Flood-gate to wet dock £. 1,100 – –						
	Drawbridge 750 – –						
		1,850	–	–			
					4,400	–	–
	Forming a roadway along the quay between Newhaven and Leith Harbour				1,200	–	–
				£.	113,359	11	6
	Add contingencies, 10 per cent.				11,335	19	6
				£.	124,695	11	–
	Deduct saving effected on the carriage of stone by means of a railway, per Mr. Johnston's letter of 12th Nov. 1834, 12,625*l.*, but say only				9,695	11	–
	Reducing the Total Amount to the sum of			£.	115,000	–	–

On reflection, I thought it might be expedient to obtain the judgment of practical men respecting the prices enumerated in the foregoing estimate, not because I had any doubt of their correctness and applicability, but because it seemed to me that all who are interested have a right to be fully satisfied on this very important point. I accordingly requested the opinions of Messrs. Robert Dobson and John Forsyth, the former being one of the most respectable builders in Edinburgh, and the latter having executed not only all the deep-water masonry of the piers at North and South Queensferry, but likewise that of Newhaven Pier itself.

I therefore subjoin their letter on the subject.

"Sir, "Edinburgh, 18 Nov. 1834.

"Agreeably to your request, we have examined the prices of the various branches of your estimate, of the works you propose for the improvement of Leith Harbour, and according to the explanation you have afforded us, as to the peculiar manner of executing the works in question, we are of opinion that the prices affixed to each particular branch in your estimate are fair and liberal; we are further of opinion, that if, as you propose, a railroad be laid down from Craigleith Quarry to Newhaven, a very considerable saving of carriage would be effected.

We are, &c.

(signed) "*Robert Dobson.*
"*John Forsyth.*"

"To James Anderson, Esq. Civil Engineer."

James Anderson.

Edinburgh, 20 Nov. 1834.

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Report of *Thomas Grainger* *John Miller*, and Esquires.

REPORT relative to the Formation of a HARBOUR and WET DOCK at *Trinity*, on the South Side of the Frith of Forth, near Edinburgh, by *Thomas Grainger* and *John Miller*, Civil Engineers, Members of the Institution of Civil Engineers, London.

Plan No. 11.

Leith Harbour.

THE improvement of the harbour of Leith is a subject which has long and anxiously engaged the attention of the Lord Provost, Magistrates, and Council of the city of Edinburgh, to whom the sole direction of the affairs of that port was intrusted, prior to the establishment of the Leith Dock Commission in 1826, and in whom the management of its revenues is still vested. None of the attempted ameliorations of the Town Council, however, having proved of any permanent benefit, the matter has been taken up by the public; and various schemes have been brought forward, either for remedying the natural defects of the present harbour, or for supplying its deficiencies, by the establishment of another in a more favourable situation. The undertaking which is the subject of this Report is regarded by some as likely to become a rival to the port of Leith, and by others (as we think with more justice,) as a necessary appendage to it, which is loudly called for by the altered and still rapidly changing shipping trade of the country. Before entering upon the immediate object of this Report, it may not be out of place to consider, shortly, the additions and alterations which have been made at the port of Leith, since the beginning of the last century, and to inquire how far the advantages arising from them have been commensurate with the great sums which have been expended in their completion. About the year 1700, a general notion seems to have been entertained, (and the same ideas are still but too prevalent,) that the extension of the pier, and the erection of dams on the river near Leith Mills, would remedy every existing evil, and afford all the accommodation required. Accordingly, we find that, in 1710, a petition was presented to Queen Anne by the Magistrates and Council of Edinburgh, to obtain a survey of the harbour of Leith, and a grant of money for its improvement. In consequence of this petition, two members of the Navy Board, and three of the Trinity House of London, were sent to survey the shores and harbour on both sides of the Frith of Forth, but particularly the harbour of Leith, and the result was, a grant of 30,000 *l.* for extending the two piers, and making a sluice above the bridge, by which it was expected that the depth of water on the bar, which then varied from 14 to 17 feet, would be increased to 20 feet.* Since that date, it is well known that, independent of the large sums which the docks have cost, the piers have been greatly extended, and other attempts to deepen and improve the harbour have been made, at a large expense, notwithstanding which, the depth of water on the bar is still considerably short of 20 feet, so that the whole money which has been laid out during the last century seems to have done very little good, and this is the more to be regretted, as it is now used as an argument against the formation of a harbour, in another situation better adapted to the wants and exigencies of the present state of trade.

Mr. Rennie's plan for its improvement.

In 1798, the Magistrates and Council of Edinburgh consulted the late Mr. Rennie, when he suggested the formation of a new entrance to the port, and gave a plan accordingly, in which he proposed to construct the two docks which have been executed, another nearly as large as them both, immediately to the westward, and an outer harbour with its entrance nearly opposite Newhaven, and about 230 yards to the eastward of Newhaven Pier. It is understood that on the two docks, the only part of Mr. Rennie's plan which has been carried into effect, upwards of 300,000 *l.* have been expended. The great expense of this part of the plan has prevented the execution of the remainder, and from the enormous debt for which Leith Harbour and Docks stand mortgaged, there seems not the least probability of its being ever carried farther. Considering all this expenditure, we might naturally expect to find Leith Harbour one of the finest in the country; how much it is the reverse, every one knows; its deficiencies, however, are but the consequence of contending against insurmountable natural obstacles, and of overlooking or disregarding the general advantage of the trade

* Excerpt from minutes of Council of the City of Edinburgh, 30th August 1710: "It is necessar, for preventing of mistake, to observe, that the Report made by those who were especially employed by the Lord High Admiral, takes notice, that the water, when they were there, did only rise above the bar of Leith fourteen foot; whereas that Report from the Trinity House at Leith, subscribed by the whole members, bears, that the water rises fifteen, sixteen and seventeen foot, both which are true; and the reason of the seeming difference is, because when the gentlemen who were sent from the Admiralitie, visited that harbour in May last (1710), when there had been, as it happens sometimes, a long tract of easterly winds, which had sent in a great deall of sand upon the bar, and which the carrying out of the peer, according to both opinions, will certainly occasion and raise the water to twenty foot, which, it's presumed, will be sufficient for the service of her Mat.tie's largest ships; and what use that may be to the Government is apparent." From the "Plan of the Harbour and Docks of Leith," dated 1831, made out by Messrs. Dall and Leslie, superintendent and resident engineer of the harbour and docks, it will be seen that the depth of water at high-water on the bar, at that date, was, at

	Ft.	In.
Average spring-tides	17	9
Average neap-tides	13	9
Average of all tides	15	3

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Report of *Thomas Grainger*, and *John Miller*, Esquires.

trade and navigation of the country, for the purpose of benefiting or preserving some insignificant local interests.

But notwithstanding all the money which has been already fruitlessly expended, there are still many to be found who contend that there is nothing to prevent the present harbour of Leith being made sufficient for all the wants of the trade. To this subject we have given the fullest consideration, and we feel confident that we shall be able to show, by investigations and surveys made, not only by ourselves, but by almost every scientific engineer whose attention has been directed to it, that all has been done for Leith which can be done, consistently with that economy which is due to the shipping interest of the country.

We have already seen that the late Mr. Rennie condemned the present approach to Leith Harbour, by proposing another near Newhaven; but, according to Dall and Leslie's chart, even the Newhaven entrance would not have been sufficient for the present trade, there being, at the spot which Mr. Rennie contemplated as the seaward termination of the piers, only one foot of water at low water, besides which, the ground in the offing is foul.

Mr. Chapman's plan for its improvement.

Subsequently, Mr. Chapman, engineer, was consulted, and according to his advice, the eastern pier was extended, and some other additional works were executed, which in all, we believe, cost somewhere about 28,000 *l.* How far the advantages derived from these additions have been adequate to the expense, we shall leave to those connected with the harbour to determine.

Mr. Telford's.

In June 1828, the late Mr. Telford, by order of Government, inspected the harbour of Leith, when he recommended that a back-water pier should be constructed, with a range of beacons along the present entrance channel from the then pier-head, by doing which he evidently did not expect that the harbour would be very materially altered, but only, as he expresses it, that "it would render Leith as perfect as its localities admit of." In fact, Mr. Telford must have been satisfied that accommodation could not be obtained at Leith for steam-vessels at any moderate expense, for he recommends that a landing-place of masonry, 100 yards in length, should be constructed about 400 yards from the present pier-head of Newhaven, and connected by means of stone piers with a gangway of timber. This plan was estimated at upwards of 38,000 *l.*, but it was only intended as a landing-place, and not as a harbour, within which steam-vessels or others of a large class could lie in safety.

Mr. Stevenson's.

The possibility of improving Leith Harbour has been frequently considered by Mr. Stevenson, civil engineer, and in his report relative to a proposed harbour at Granton, he says, "That the original attraction to Leith, as the port, was evidently the outfall of the river of that name, but the extensive flat which covers the entrance to the harbour seems to render abortive every effort for its improvement. In order to obtain a depth of 12 feet water at low water, spring-tides, the piers at Leith would require to be extended about a mile seaward of high-water mark. The inconvenience which would attend communicating with vessels at the low-water extremities of such extensive piers, together with the difficulties, and in certain states of the weather, the impossibility of hauling vessels along them, as well as the expense of executing works of that magnitude, render the improvement of the entrance to Leith Harbour a very hopeless undertaking." Mr. Stevenson accordingly proposes that, instead of improving Leith Harbour, an entirely new one should be made at Granton, of which we shall hereafter take notice.

Mr. Cubitt's.

In September last, Mr. Cubitt, civil engineer, London, (by the direction of Government,) made a survey of the south shore of the Frith of Forth, between Leith and Granton, and he also concurs with the eminent engineers who preceded him in thinking that the accommodation which the trade of the port requires cannot be obtained by improvements on the harbour, and recommends that a new entrance should be made immediately to the east of Newhaven pier, and almost precisely opposite the place recommended by Mr. Rennie for that purpose 36 years ago.

Mr. Anderson's.

Still more recently a plan and report have been published by Mr. Anderson, civil engineer, who says, in reference to this subject, "It is matter of public notoriety that the port of Leith can never, from its present entrance, be more than merely a tidal harbour," and that "the situation of the pier and natural causes combine to preclude the possibility of its ever being made a low-water harbour by the present channel. It may indeed be possible, at an enormous expense, to extend the pier seaward to the deep channel of the Forth, but no artificial means can overcome the natural obstacles, either by deepening the channel of the river Leith along the pier, or keeping its course free. The immense shoal of sand, which extends over a space of nearly five miles from Newhaven pier to the east of Portobello, and reaches seaward beyond the Martello Tower, is continually shifting, and would soon fill up any excavation of the channel of the river Leith. That river itself, besides, in time of flood, continually brings down a great quantity of alluvial soil which accumulates and is deposited at its junction with the waters of the Frith, thus forming a bar across the channel and fairway of the harbour, which it is impossible for any works of art to prevent or remove."

Captain Boswall's opinions of the present entrance to Leith Harbour.

It is hardly necessary to bring forward any more evidence to show that low-water accommodation cannot be obtained at Leith; nevertheless, we cannot but advert to an excellent letter, addressed by Captain J. D. Boswall, R.N., to the proprietors of steam-boats connected with the Frith of Forth, in which he says, "If a low-water pier could be had at Leith, it would be of the utmost importance to that port, and add greatly to its prosperity, by admitting steam-vessels, as well as sailing packets, ferry-boats and pinnaces, to arrive and depart at all times of the tide. This however cannot be accomplished, and Leith Harbour must for ever remain a dry one, until sufficient funds can be collected for carrying the present extension of the east pier beyond the bar into deep water, as nature has thrown difficul-

ties

ties in the way of constructing low-water piers there, except at the enormous expense which it must necessarily require to carry them into the deep channel of the Frith."

Here, then, is a list of scientific men, who, however they may differ in some points, yet all agree in this, that low-water accommodation cannot be had at Leith, and that, although such vast sums of money have been expended, no material increase in the depth of water has been obtained since the reign of Queen Anne. No one can doubt that if we wish to maintain even our present trade, low-water accommodation must be immediately provided, more especially if Edinburgh and its vicinity are to become the seat of manufactures.

Present state of the trade.

Mr. Cubitt, in his report, states, "That the trade of the port is done by means of vessels, the average of the whole of which is under 80 tons, I believe nine-tenths of the whole under 100 tons." The reason is obvious. The harbour will not admit of larger vessels, and until a harbour fit for the reception of such is provided, no material change could be expected. But what is the fact? In spite of every disadvantage, numerous steam-vessels of the largest class are now employed in the Leith and London and north of Scotland trade, although goods and passengers are in all weathers exposed to the dangers and inconvenience of open boats, and the vessels themselves (among which there are some of the finest perhaps in the world,) must anchor in the roads, without any shelter, except what is afforded by Inchkeith. Only two of the large class steam-vessels are brought into Leith Harbour, (and these take the ground at every tide, and are unable to sail except at nearly high-water). None of the others have any connexion with Leith, but make what use they can either of the Trinity Chain-pier or Newhaven Pier, and even the ferry steam-boats are frequently, from want of water, prevented from landing their passengers at Newhaven Pier.

Proposed Trinity Harbour.

While all admit the propriety, or rather the necessity, of some remedy to the evils attending the harbour of Leith, and of procuring sufficient accommodation somewhere in the vicinity of Edinburgh, yet there is considerable diversity of opinion as to the most eligible situation for the new works. In February last, a plan and report of a harbour at Trinity were prepared by us. Since then various other projects have been brought forward, and very considerable discussion on the subject has taken place, but we are still convinced that Trinity is decidedly the best situation for constructing a harbour capable of affording all the accommodation for an extensive trade in the vicinity of Leith. The only alteration which we would now propose on our original plan, is a reduction of the extent of the accommodation, by which the expense will also be considerably reduced. While we do this, we are still satisfied that the plan now submitted will give sufficient accommodation, not only for the existing trade, but for a very considerable increase. In our former Report we stated our conviction that Trinity was the best situation for the harbour. It may be said that, having been professionally engaged in preparing plans for a harbour at Trinity, it becomes our duty to support that situation, but to this we would answer, that having farther examined the coast, with the whole plans which have been submitted by others to the public, and maturely considered the subject in all its bearings, we are perfectly convinced that, all circumstances taken into account, Trinity is decidedly the best situation. Referring to the map of the coast, which accompanies this Report, it will be seen that a sand-bank begins near Musselburgh and terminates to the west of Leith Harbour and near Newhaven Pier, a distance of upwards of six miles; and that another commences to the eastward of Caroline Park, and terminates about the Hound Point, near Queensferry, a distance of upwards of four miles, leaving a clear space or bay, free from sand, at the bottom of which Trinity Chain-pier and the site of the proposed harbour are situated. The situation is therefore away from the sand-banks, and the bottom being generally composed of firm blue clay, is admirably adapted for the construction of extensive and durable works. But besides deep-water is as close to the shore at Trinity, if not closer, than at any other place between the two sand-banks, and there is no foul ground near it. Leith roads too are almost right off, but rather to the east; and the south channel, where there is excellent anchorage, is broader off Trinity than at the immediate roads, and a vessel has abundance of sea-room between the anchorage ground there and the dangerous flats at the head of the south channel near Cramond and the Mickry Isles. The proposed harbour is within 2,200 yards of the Custom-house, or the lower drawbridge, which may perhaps be taken as the centre of Leith, with which a direct communication can easily be formed by means of a perfectly level road, (or railway, should such be found requisite,) at a very trifling expense. As regards Leith, the warehouses and places of business would be brought as near to the same depth of water as they could be by the extension of the present pier. As regards Edinburgh, assuming the Register-office as being nearly the centre of business, Trinity is almost as near as Leith, and if the south end of the Earthen Mound is taken, it is quite as near, a straight line being measured between the points; but, by the existing roads, the shore at Trinity is the nearest to the Earthen Mound. As a ferry station we consider Trinity the best which can be obtained on the south side of the Frith, considering depth of water, with the vicinity to Edinburgh, Leith and the populous country to the east. These are the principal reasons for the adoption of Trinity as a situation for a harbour, and we are confident that, upon full investigation, they will be found satisfactory to every candid inquirer.

Description of the works.

In proposing a harbour for the accommodation of large vessels, we consider a wet dock, in which they can be always kept afloat, essentially necessary, as every one must be aware how much it strains a heavy vessel when it is allowed to ground, and especially steam-vessels of the larger classes. What we propose, therefore (referring to the annexed plan), is to construct a wet dock, containing 18½ acres, and affording inner wharfage to the extent of 3,540 feet, and in such a form as will admit of the construction of jetties, so as to allow the extent of wharfage to be increased, should trade at any future period render such additional accommodation necessary. The dock to be entered by a double gate lock,

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250 feet in length by 60 feet in width, which is of sufficient dimensions for the admission of a ship of the line, or a steam-vessel of the very largest class.* The double gates admit the passage of vessels at all times, when there is sufficient water on the outside to float them, and which at low water of spring-tides will not be less than 10 feet, and of neap-tides about 14 feet. The entrance will be protected by a substantially-built breakwater, 1,200 feet long, founded in 11 feet water at the lowest ebb of spring-tides, and which, with two check piers built upon arches, each 270 feet long, will secure an outer harbour 710 feet long by 500 feet wide. The points of the breakwater will project 200 feet on each side beyond the points of the check piers, and it will be constructed in such a manner as to admit of vessels being laid along its inside wall. Within this harbour, and on the east side of the lock, it is proposed to construct a low-water landing-slip or inclined plane, by which passengers, cattle, carriages, or any kind of merchandize, could be landed or embarked with the greatest facility, at all times of the tide. The quay in which the landing-slip is made to be 324 feet long, and a quay of the same extent on the west side of the lock, which, with the check piers, will give every accommodation and facility for the landing or discharging the cargoes of steam-vessels of even the largest class, while those which may have to wait their time of sailing can be drawn up along the breakwater or anchored within the harbour. For the accommodation of the ferry steam-vessels and others, which are confined more to the passenger trade of the Frith, it is proposed to have landing-places on the outside of the harbour, by which means they will be enabled to run as readily out and in as they can do now at the Chain-pier, with the additional advantage of being completely sheltered by taking the eastern or western side, so as to suit the weather in the Frith. It is proposed to make the two piers, which form the east and west sides of the dock, 90 feet wide, to admit of a wall being built on each for enclosing the dock and its wharf ground; the interior wharf grounds on each side of the basin or dock to be 50 feet broad, leaving a width of 36 feet on the outside of the walls for the purpose of forming a carriage-way and footpath for the use of the trade of the outer harbour. By this means the trade of the dock and harbour may be kept perfectly distinct, and at the same time each will be sufficiently accommodated. In the construction of the dock it is proposed that the south or land side should be carried out to about the low-water mark, leaving a clear space of ground 380 feet broad, as store ground; and again, between the dock and the outer harbour, it is proposed to leave a space of ground 350 feet broad, for the purpose of affording room for coal yards, and for what other accommodation may be required for the trade of the outer harbour. It is also proposed to erect two lighthouses, with cranes and other conveniences.

Depth of water.

From soundings carefully taken by us, and which agree very nearly with those marked on Dall and Leslie's excellent chart of the coast adjoining Leith, we find that there will be a natural depth of water in the outer harbour at the lowest ebb of spring-tides (and which is assumed, as in Dall and Leslie's chart, at one foot nine inches below the level of the sill of the docks at Leith,) varying from 10 feet at the dock gates to 11 feet 1 inch at the side next the breakwater. It is proposed that the wet dock should be excavated, so as to give it the same as the natural depth at the gates, which is 10 feet under low-water mark. The average rise of spring-tides is 18 feet 6 inches, so that in the outer harbour there will be a depth of water at high water from 28 feet 6 inches on the one side to 29 feet 7 inches on the other, while in the dock there will be 28 feet 6 inches, a depth sufficient not only for every trading purpose, but for the largest of His Majesty's ships frequenting the Northern Seas.

Advantages from the plan of the works.

Having now described the nature of the works which we propose should be constructed at Trinity, we have next to point out some of the advantages which the proposed plan will have over any other yet laid before the public. Those who have paid any attention to the construction of harbours will have found that there are two great objects to be attended to: the one is to obtain sufficient shelter, the other is to prevent silting; but it often happens that while there has been great care in attaining the former the latter has been overlooked, and indeed, in many cases, what is done to provide a sufficient shelter turns out to be the very means for promoting the silting, and this is especially the case when harbours are constructed in a tide-way. Having these two objects distinctly in view in making out the plans of the proposed harbour at Trinity, we flatter ourselves that we have succeeded in arriving at a plan which will be found not only to give sufficient shelter, but that, though in a tide-way, the water will rather have a tendency to deepen than to silt up. To say nothing of the expense, we have great objections to obtain depth by dredging where it can be obtained otherwise, as it very seldom happens that the dredged depth can be preserved, except by continual recurrence to the same means. A dredged depth may be maintained without much trouble when the trough which is dredged is parallel or nearly so to the run of the tide, or it may even be maintained, though less likely, when the trough is across the tide-way, provided the tide is allowed to sweep on without the least interruption; but it must be evident that in the trough there must be still water, and wherever this is the case, silting must to a greater or less degree take place. On reference to the plan, it will be observed that the outer harbour, which of course is open to the flux and reflux of the sea, is laid down so as to be parallel to the run of the tide, and the check piers being built upon arches, the stream either way will flow through it without the slightest interruption. As the run of the water between the shore and the check piers will be obstructed, it will naturally proceed

* The entrance lock of the Earl Grey Dock at Dundee, which was opened a few weeks ago, and which admits the Dundee and London steam-ships, is 210 feet long and 55 feet wide. These ships measure 50 ½ feet over the paddle-boxes, 180 feet from inside of sternhead and taffrail, 192 over taffrail and figurehead, and 240 feet over jib-boom and gaffend.

proceed along the sides of the dock, inclining towards the outer harbour, and the openings of the check piers (being the first outlets), will have a tendency to increase the current through the harbour, and consequently to increase the depth of water. That this will be the effect we think is so evident as scarcely to need proof; but if any were required, the additional depth which has been gained at the Trinity Chain Pier, in circumstances nearly similar to those which we are now supposing, would be sufficient for our purpose. Before the construction of that pier, we understand that the depth of water at the spot where it now terminates was, as it is still, a little farther out, five feet four inches, but in consequence of the slight interruption which the piles at the head have given to the fair run of the tide, and by causing it to flow past their sides with a certain increased rapidity, the water has deepened to six feet eight inches, being an increase of one foot four inches. We would have been satisfied could we have shown that the depth had not been lessened, but it is still more satisfactory to find that it has increased.

Estimate.

We have been at great pains in preparing an estimate of the whole of the foregoing works; and in this, as well as in the planning of the harbour, we have had the aid of the experience of Mr. Gibb, civil engineer, so well known as the most eminent contractor in this country, and who assisted Mr. Telford, when employed by Government, in 1828, in making the survey for the improvement of Leith Harbour, and the Mid Lothian and Fife Ferries. The amount of the whole is 179,729 *l.*, making large allowances for contingencies. It is unnecessary to give the details here, but we consider it proper to state, that they have been prepared with the view of being laid before a Committee of the House of Commons, where, as a matter of course, they will undergo the strictest scrutiny. We may also mention that the estimates have been made up, calculating on the works being done in the most approved manner; all the walls, both outer and inner, being of substantial masonry, of sufficient strength to resist the action of the heaviest seas. The breakwater is in like manner of the strongest formation, and we have admitted no stone casings or clay nucleus into any part of the works.

Remarks on the different plans for procuring shipping accommodation.

Having now described the proposed works, we shall, before concluding this Report, shortly inquire into the comparative merits of the different plans which have been submitted to the public.

Mr. Rennie's.

The first in order is that of the late Mr. Rennie, which, however well it might have been adapted to the state of the trade at the time when it was proposed, when steam-vessels were unknown, is by no means suited to it at present, and we therefore consider it needless to do more than allude to it.

Mr. Telford's.

The late Mr. Telford comes next in order, and he seems to have considered Leith as hopeless; he, however, recommended that the Newhaven Pier should be extended as a landing-place for a ferry station, but in doing so did not contemplate the formation of an extensive harbour. In a Report to the Commissioners of His Majesty's Woods and Forests, dated 12th April last, after pointing out Newhaven and Burntisland as the points most advantageously situated on the Frith for steam-boat landings, he states, in regard to Trinity, that from its being "adjacent to Newhaven," it "will be sufficiently convenient as a landing-place to connect with Burntisland."

Mr Cubitt's.

Mr. Cubitt, in September last, gave a plan and report, which we formerly noticed. Mr. Cubitt, in order to make Leith Docks available, proposes "to include all the space between the western dock and Newhaven Pier with dry rubble stone, breakwaters, or piers, as shown in the plans, with an entrance between them, at a depth of 12 feet low water spring tides, and within the space thus included to excavate and dredge out a channel from 12 to 15 feet deep below low water, and of sufficient width for the largest steam-vessels to leave or pass. By this simple means will a harbour be formed, in which accommodation will be made for all the ferry packets and London trade, in the most economical manner possible."

We find that the accommodation which Mr. Cubitt proposes to afford, assuming all the data on which he proceeds to be perfectly correct, is obtained by the simple means of spending 125,000 *l.*, but this he states in rather a hesitating manner, as there is something said about its costing 150,000 *l.* But without pointing out the many inaccuracies in the calculations upon which this estimate is founded, we are of opinion that his estimated prices are too low; for instance, for dredging hard blue clay under low water, he calculates on 1*s.* per cubic yard; now, it is well known to all who know anything about such works, that it cannot be done at this rate, and that 2*s.* 6*d.* is much nearer the price which should have been assumed. There are nearly 450,000 cubic yards of this stuff, which would of itself increase the estimate upwards of 33,000 *l.* But admit that his estimate is correct, we think we can show that he has promised more than could be realised. We have laid down the position of his entrance on the chart prepared by Messrs. Dall and Leslie, "the accuracy of which," says Mr. Cubitt, "I had many opportunities of proving," and we find that at the spot in question, instead of a depth of 12 feet, as he states, there are only nine feet. Within this entrance he speaks of dredging out a channel from 12 to 15 feet deep, as if three feet were very immaterial, and as if a 15 feet channel would not cost considerably more than a 12 feet one; but let this channel be either the one depth or the other, we would ask what is its use, when vessels cannot get into it, the entrance being only nine feet? He has, therefore, even admitting the whole of his assumed data and calculation, only obtained a channel leading to Leith Docks with nine feet water, so that at low water every vessel of any considerable burden in it will be aground; and to what does this channel lead? Why, it leads to Leith Docks, in which there is at average spring tides only 16 feet 9 inches water, and at average neap tides 12 feet 9 inches, (supposing that the height of the water in the docks were always the same as that of the previous tide.) Mr. Cubitt's plan will, therefore, do little

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little for the better accommodation of the shipping, and if executed, will only form one of those temporary but expensive expedients, which have already proved so hurtful to the commercial as well as the pecuniary interests of the city of Edinburgh. We object to the principle on which he proposes to execute these works, and we believe that we are borne out by almost every one who has examined the subject, when we say that they would not be of sufficient strength to resist the action of the sea. We also entertain strong objections to Mr. Cubitt's plan, not only on account of the want of breakwaters to shelter the entrance from the northerly winds, but from the impossibility of maintaining the depth even of nine feet, without the constant and expensive application of dredging machines; as, from the construction of the harbour, with a low sand bank near its entrance, every tide will cause an influx and deposition of sand and mud, more especially during easterly winds, so prevalent in this neighbourhood. In a word, if we were called upon to give a design for reclaiming that part of the shore, and forming it into dry ground, as we believe a portion of it was about a century ago, we are persuaded that we could not have recommended anything more suited for the purpose than the breakwater proposed by Mr. Cubitt. We consider it unnecessary to go further into Mr. Cubitt's plan, than generally to remark, that a good harbour cannot be obtained at the same expense off Newhaven Pier, or to the east of it, as it can be at Trinity, because the ground off Newhaven Pier, and between it and Leith, is shallow and foul, and we believe it is understood that the late Mr. Rennie, on that account, considered the Newhaven Pier as a failure. At Mr. Cubitt's proposed entrance, the water is very shallow, and a depth of 10 feet cannot be obtained nearer the shore than 770 yards, while on the west of the pier the ground is clear, and the same depth of water can be got within 580 yards of the shore.

Before taking leave of Mr. Cubitt's report, we have to notice the unfair comparison in the expense, which he was pleased to make between his proposed works and ours. The estimated expense of Trinity amounted to 250,000*l.* including the purchase of the shore ground, and all parliamentary and other expenses. This Mr. Cubitt put down at 300,000*l.* He indeed states the reason to be, that we have not included warehouses, approaches, roads, railways, &c.; but we would be glad to know how Mr. Cubitt would have us to calculate on the expense of either approaches or roads, as those leading to Trinity are already excellent, and why he would have railways necessary for the completion of our plan, when he does not require them for his own? Warehouses we certainly had not; but what was to be done with 50,000*l.* worth of warehouses, such premises not being now in quite the same repute as they used to be, when the means of conveyance were more tardy and uncertain? We believe the whole steam-boat trade of the Frith is at this moment carried on without warehouses, or, if they do exist, it is to a trifling extent. We confined ourselves, therefore, to 250,000*l.* and for that there would have been a wet dock of 42 acres, with a depth of 28 feet, affording an inner wharf of an excellent and durable description, to the extent of 12,000 feet, and an outer harbour with 11 feet of natural depth of water at the lowest ebb of spring-tides, completely sheltered from all winds, and accessible at all times, and capable of maintaining, if not increasing its depth—a circumstance of great importance to the success of such an undertaking.

Mr. Cubitt's estimate, on the other hand, amounted to 125,000*l.* or 150,000*l.* without any allowance for Act of Parliament or expenses of management; and for this, as we have shown, there could only be obtained a channel leading to Leith Docks, of nine feet water, liable to be silted up, or, if kept clean, only at a very heavy expense; and three timber wharfs, at which no vessel of any great burden could lie without being aground at every tide. Between the two plans, therefore, there could be no comparison. We are now inclined to think that ours was, perhaps, too extensive for the immediate probable trade; and we, therefore, have diminished it, maintaining at the same time all the general principles we at first laid down, and being satisfied that the superior accommodation which it affords will be obtained at a sum almost as low as that which Mr. Cubitt states for his, and certainly for much less than what it would actually cost.

Mr. Anderson's.

In November last, Mr. Anderson published his plan for the improvement of Leith, and report thereon. Mr. Anderson proposes to make a steam-vessel harbour immediately west of Newhaven, by means of extending a pier out from that of Newhaven, but in a more westerly direction, to a natural depth of 10 feet water, forming, as it were, the east covering of the harbour, and by a breakwater stretching from the shore, and forming the west covering. In this breakwater there are to be six arches, the whole of which give a water-way of 200 feet. From this harbour a wet dock or canal is to extend to Leith Docks, with an entrance-lock 170 feet by 60 feet. Mr. Anderson's proposed pier-head is on the same parallel with the eastern entrance to the proposed Trinity Harbour, the entrance to Trinity Harbour being in deeper water, and consequently a little farther out. We have read Mr. Anderson's report with much pleasure, and are glad to find that his opinions, in many points, coincide with our own. To his plan, however, we have precisely the same objections which we have to Mr. Cubitt's, viz. that it would not maintain its depth without constant dredging. Mr. Anderson imagines that the arched water-way in the breakwater will, by admitting the receding tide, scour out the harbour through its entrance. Now we feel confident that the receding tide will have no such effect. The arched water-way and entrance are nearly on the same parallel, and only distant from each other about 800 feet, so that the force of the current will be precisely the same, or nearly so, at both places, and consequently the water in the harbour will be at a stand still, beyond the ordinary rising and falling of the tide. By his own showing, the ebb tide passes close along the south shore; this being the case, it is obvious that the position which he proposes to give to his eastern pier will have the effect of

of checking the stuff carried by the receding tide, and of conducting it into the harbour. Admitting, however, that there would be a current through the harbour in the way in which Mr. Anderson imagines,—the dredged channel which he proposes, being below the natural channel, the current could not reach it, so that, suppose the natural depth of water might be maintained in the harbour, which we do not imagine would be the case, the artificial depth could not be maintained; on this account, therefore, we consider Mr. Anderson's plan defective, and not capable of affording the necessary accommodation. On going over Mr. Anderson's estimate of the work, we find that his prices are much below those contemplated by us. We shall be glad to find that he is right, for if the work can be done so cheap at Newhaven, it can be equally so at Trinity; we would not, however, peril our parliamentary estimates at such low rates. The same kind of work which he estimated at 6*d.* per yard (the excavation of the canal), we reckon at 1*s.* 6*d.*, this would increase a sum which Mr. Anderson states at 7,020*l.* to 21,060*l.*; again, we may compare the price of his wharf walls—he calculates these at 9*s.* per cubic yard; we, on the other hand, taking the average of the rubble and ashler, calculate ours at about double that sum; this would increase a sum which Mr. Anderson states at 11,664*l.* to 23,328*l.* We might compare other parts of his estimate with ours, but we think we have brought forward enough to show that either Mr. Anderson is too low with his prices, or we are too high with ours. As to Mr. Anderson's proposed steam-boat harbour, he seems to have overlooked the fact, that a great portion of it would be situated above low-water mark; or if he intended to obtain the necessary depth by dredging, he has omitted, so far as we can see, to include the expense in the estimates.

Messrs. Stevenson and Son, in December last, published their plan of a harbour at Granton, with their report thereon. They propose constructing a deep-water harbour and wet docks upon two scales. The first and largest (represented by dotted lines on the annexed plan), is a harbour to contain 35 acres, with an entrance in 12 feet water, and two wet docks each 6¼ acres, the estimated cost amounts to 268,905*l.*; the second (represented by full lines), is a harbour to contain 11 acres, with an entrance in 8 feet 9 inches water, and one wet dock of 6¼ acres, and is estimated at 120,000*l.* The former of these scales is, like our original design for Trinity, somewhat too large, and it has accordingly been modified; to the modified plan we have now to advert. Messrs. Stevenson's.

With regard to the situation, which is described by Messrs. Stevenson as the most eligible, because (among other reasons) deep water is to be found nearer shore at Granton than at any other point between that and Leith*, we deny the fact assumed. In measuring on Messrs. Stevenson's plan, the distance from high-water mark to 12 feet 4 inches and 8 feet 9 inches, the depths of the entrance of the two scales of harbours respectively, we find that they correspond so nearly, that we may almost say they are the same with the distances from high-water mark, to the same depths off Trinity Chain Pier, as measured on Dall and Leslie's chart, which was carefully verified by us. The distances are certainly greater when measured on Messrs. Stevenson's plan, but without disparaging their plan, we are more inclined to take our own soundings, seeing that they so nearly correspond with Messrs. Dall and Leslie's, and are rather less than those taken by Captain Thomas, admiralty surveyor, who was engaged for several years in surveying the Frith of Forth, for the purpose of constructing an official chart, and who, in written answers given by him, dated Deptford, 7th April 1834, to written questions put by permission of the hydrographer of the Admiralty, relative to the proposed harbour at Trinity, states, "The soundings taken by Dall and Leslie are a few inches less than were found by me when surveying the spot (Trinity)." It thus appears that Granton is not better in respect to deeper water than Trinity. We cannot but notice the manner in which Messrs. Stevenson make their comparisons in taking notice of the depths of water at several places along the coast. They couple Newhaven and Trinity as the same; now the distance to deep water off Newhaven Pier is much greater than it is off Trinity Chain Pier. Messrs. Stevenson find that Granton is more eligible on account of landward facilities. But we must state how Messrs. Stevenson arrive at this conclusion. They fix on the Earthen Mound (at Prince's-street, we presume) as the centre of Edinburgh; we have no objection to this point, but at the same time it cannot be held as the centre of the city in a business point of view. It is well known that the North Bridge forms the chief connexion between the Old and New Towns, and that the Mound, on account of its steepness, is used principally as an approach to the courts, and by foot passengers; and that, if there is a point to be laid down as equally convenient to both the Old and New Towns, the Register-office must be held to be that point. Having assumed the Earthen Mound as the central point of Edinburgh, they state that their proposed harbour at Granton is 130 yards nearer to it than Trinity. This certainly appeared to us very extraordinary; and consequently led us to inquire how the fact stood, and in order to give Messrs. Stevenson every advantage, we made use of their own map. To arrive at this difference in favour of Granton, Messrs. Stevenson have assumed a new road (running parallel for half its distance, and within

* We have to state, that the datum of Messrs. Stevenson's soundings is different from ours and that adopted by Messrs. Dall and Leslie. Messrs. Stevenson have adopted the sill of Leith Docks, whereas we, as well as Messrs. Dall and Leslie, have assumed a level 1 foot 9 inches below the sill of the dock, owing to its being nearer a very low tide; consequently Messrs. Stevenson show a greater depth of water than we do; but in order to bring them to the same datum, 1 foot 9 inches will require to be taken off all Messrs. Stevenson's soundings; the depth 12 feet 4 inches on Messrs. Stevenson's plan, is equal to no more than 10 feet 7 inches on our or Messrs. Dall and Leslie's plan.

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within 800 feet of the present excellent road by Inverleith Row to Trinity,) from their harbour to the bottom of Pitt-street, passing through valuable grounds, not even allowing the Horticultural Garden to escape. They further imagine a new bridge over the water of Leith. They then proceed with their comparison, taking the present road from Trinity, leaving out of view, that if new roads are to be assumed as made, the same mode of calculation must be applied to Trinity, or any other spot, as well as Granton; but we have no hesitation in saying, that a few hundred pounds will make the present road to Trinity nearly a straight line. In comparison, therefore, let us reduce all the subjects of comparison to the same standard. By a straight line from Pitt-street Tollbar, (which is a point on the road common both to Granton and Trinity, assuming the Earthen Mound as the central point of Edinburgh), to the proposed harbour at Granton, the distance is 3,033 yards, and to Trinity 2,390 yards, making a difference in favour of Trinity of 643 yards. Again, taking the distance by the present roads, the distance between Granton Harbour and the Tollbar, and between Trinity and the Tollbar, is 1,300 yards in favour of Trinity. As regards the connexion with Leith, the proposed Trinity Harbour is 1,566 nearer it than the proposed Granton Harbour.

With regard to Granton as a ferry station, which, in Messrs. Stevenson's report, is classed among the landward facilities, the nearer a ferry station is to the population which it is to accommodate, we should think, *cæteris paribus*, the better. Now, if this is admitted, Granton is not only not the best situation, but it is the worst of all the places proposed. Besides having the opinion of the late Mr. Telford, in favour of Trinity, as a ferry station, we have shown that it is nearer than Granton to Edinburgh and Leith. Beyond all question it is a great deal nearer, and consequently, much more convenient to all the thickly inhabited country to the east of Leith. The distance between the entrance of the harbour at Granton and Burntisland, the nearest ferry station on the north side of the Frith to Granton, is only 100 yards less than between Burntisland and Trinity. But Burntisland is not the most important station on the north side of the Frith; in 1832, there were only 20,036 passengers between Newhaven and Burntisland, while there were 60,968 between Newhaven and Pettycur, and Kirkaldy. Measuring the distance, therefore, from Pettycur to Granton and Trinity, the difference in favour of the latter is 570 yards. So inconvenient would Granton be as a ferry station for Leith, and the populous district along the shore, by Portobello, Fisherrow and Musselburgh, that the passengers from those places would be much more likely to take the ferry at Leith, even with the certainty of being much longer upon the passage, than travel half the distance between Cramond and Leith before going on board.

As to the lines of railway proposed by Messrs. Stevenson, it appears to us that they cannot be regarded as part of the project, as no provision is made in the estimate for their execution. Besides, Granton holds out no advantages in this respect, as a railway may be made as easily from Trinity to the Union Canal as from Granton, and certainly much more easily to Leith.

But further, we entertain a decided objection to Granton, because it rests upon the eastern extremity of the Drum Sands, a sand-bank, as we have already noticed, which stretches from the Hound Point, near the Queensferry, to the situation chosen by Mr. Stevenson. On reference to a chart of a portion of the Frith of Forth, attached to this Report, as well as to that attached to the Report of Messrs. Stevenson and Son, it will be seen, that the northern verge of this bank extends from the Hound Point past the northern extremity of Cramond Island, Birnie Rock, and two other rocks, situated at a very short distance to the west of the proposed harbour. That these promontories and rocks guide the current which defines the extremity of this sand-bank, we think there can be no doubt whatever, and that if they had been further seaward, the bank must also have extended further. This bank is understood to have increased several hundred feet during the last 20 years, and can it for one moment be doubted, that if the works proposed by Messrs. Stevenson were executed, it would immediately extend to them, and thereby obstruct, if not entirely close the harbour itself? We have many instances of similar results, particularly on the east coast of England; and see what has taken place at Newhaven since the erection of the piers in 1812. At that time, it is said, "there was six feet clear depth of water at the lowest ebb tides, which admitted the ferry-boats and pinnaces, and now there are only at its extremity at low water, ordinary spring-tides, about two feet six inches depth of water, and in very low tides, which happen about six or eight times in the year, it is always dry *." Here then at Newhaven, we have an accumulation of about four feet of sand and mud in 23 years, and if such is the case there, what would it be at the projected works at Granton, which rest upon the great bank already described? It is also well known, that the extension of Leith Pier has had the effect of carrying out the south sands of Leith.

We also object to Granton, because it is farther removed from the anchorage ground of Leith Roads, than either Trinity or Newhaven. In reference to Captain Thomas's very accurate chart of the Frith of Forth (copy of a part of which is attached to this Report), it will be noticed, that the place marked by him as the anchorage ground is on a line with Nelson's Monument, and the spire of North Leith church, where the words "Leith Roads" are placed. Now, on reference to the chart which accompanies Messrs. Stevenson's report, "Leith Roads" are delineated nearly one mile and a half farther west, where the south channel is only about one fourth the breadth of what it is known to be off Newhaven and Trinity. To

* Captain D. Boswall's Letter to the Steam-boat Proprietors of the Frith.

To the Granton Harbour, we entertain other minor objections, such as the want of good safe anchorage ground near it; its position in relation to Cramond Island, Mickry, Oxcar Bank, Inchcolm and other islands, but we think enough has been said to satisfy every candid inquirer, that it is a scheme which it would not be for the interest of the community to have executed.

In conclusion, we have only further to observe, that we feel satisfied that we have proved:

1. That the accommodation which the shipping interest of the country requires, is not to be obtained at the present harbour of Leith, and that if any material improvement is to be effected, or low-water piers erected, the site which ought to be chosen is at a short distance to the east or to the west of Newhaven. In support of this proposition, we have adduced the opinions of the late Messrs. Rennie & Telford, Messrs. Stevenson, Cubitt & Anderson, as well as that of Captain D. Boswall, to these we may be permitted to add our own; and so far as we know, there are none of an opposite tendency.

2. We have also shown, that the situation chosen by Mr. Rennie and Mr. Cubitt on the east of Newhaven, is inferior to Trinity on the west, inasmuch as the ground in the offing is foul, and 10 feet water is much farther from the shore.

3. We have also shown, that although the point of the pier proposed by Mr. Anderson is nearly in the same ground as the entrance to Trinity, yet it is a mere landing point, and that the work is under estimated: That the actual cost of making a wet dock or ship canal from Newhaven to Leith would be far beyond any advantages which could be obtained by forming a connexion with the present wet docks, which have neither space nor depth of water to recommend them. That the entrance-lock is too small for the first class of steam-ships,* and the design itself is objectionable, in so far as there is no provision made for protecting the entrance of the harbour, and no natural means provided for scouring either the harbour or its entrance. Besides, so far as we can judge from the estimates, there is no sufficient depth in the harbour for steam-vessels.

With respect to the proposed Granton Harbour, we have shown that it is decidedly inferior to Trinity,—

1. As a ferry station.
2. That it is further removed from the business part, or the centre of Edinburgh, and that it is much farther from Leith.
3. That it involves a great extent of expensive new roads, some of which are not provided for in the estimate.
4. That 10 feet water is not obtained nearer the shore than at Trinity.
5. That the modified plan only affords a depth of seven feet water at its entrance.
6. That it is farther removed from anchorage ground, particularly that of Leith Roads.
7. That it is situated upon the extremity of an extensive and extending sand-bank, which bank could not fail to extend itself to the harbour, as soon as the works are projected into the current.

In further support and illustration of our views and opinions on this subject, we beg to refer to the documents, of which copies are printed in the Appendix.

Edinburgh, 1 January 1835.

Thomas Grainger,
John Miller.

(Appendix, No. 1.)—Copy LETTER, Mr. *Gibb*, Civil Engineer, to Messrs. *Grainger* and *Miller*.

Dear Sirs, Aberdeen, 17 January 1835.

I HAVE perused with much attention your "Report relative to the formation of a harbour and wet dock at Trinity," and have carefully considered your designs for the proposed works, and I have entered minutely into the draft of the details of your estimate for the execution of the same.

I have also fully considered and compared with your designs the various other schemes which have been from time to time proposed, either to remedy the present very defective state of Leith Harbour (the evident unfitness of which to afford accommodation for the description of trade so imperiously demanded, is now sufficiently admitted by all persons concerned in its commercial transactions), or to provide proper accommodation for its trade as near the present situation as is practicable.

Notwithstanding that of late years great exertions have been made, and large sums have been expended by Government, as well as by the incorporation of Edinburgh, under the direction of some of the most eminent engineers in the kingdom, the beneficial effects anticipated have not been realised. More recently, schemes by Mr. Anderson and Mr. Cubitt have been laid before the public; as they, however, vary but little in their general principles from some of those contemplated very many years ago for resuscitating this forlorn hope, it would be needless for me, after the very full exposition contained in your Report, further to enlarge

* The lock proposed by Mr. Anderson is only 170 feet long. The Monarch steam-ship, in the Leith and London trade, is 206 feet long, and there are scarcely one of the first-class steam-ships but what is more than 170 feet long.

Appendix, No. 5.

Report of *Thomas Grainger* and *John Miller*, Esquires.

enlarge on them.; or on that of the new harbour proposed by Messrs. Stevenson & Son, at Caroline Park, which is a most inconvenient station in every point of view, being upwards of two miles to the west of Leith.

Under all circumstances, therefore, I have no hesitation in giving the preference to your scheme, especially as it would possess the following important advantages, viz.—

Facility of entrance and departure.

Complete protection.

Deep water at all times of tide.

Great accommodation both in the outer harbour and wet dock.

Ample means for a proper classification of trade of every description.

And from the construction of the two entrances, the most efficient natural powers of not only maintaining but increasing the depth of the water.

Likewise a very superior station for the ferry steam-vessels.

I am of opinion that your estimate is quite sufficient for the execution of every part of the works proposed by you, and should have no hesitation to undertake the works for the sum therein stated.

I am, &c.

(signed) *Jno. Gibb.*

To Messrs. Grainger & Miller,
Civil Engineers, Edinburgh.

Appendix, No. 6.

Appendix, No. 6.

ABSTRACT VIEW of the Revenue and Expenditure of the Corporation of the City of *Edinburgh* for Ten Months, from November 13, 1833, to September 13, 1834; with General Statements of its Debts, Property, Revenues, &c.

It is necessary to premise, that this Abstract cannot give a complete view of the annual revenue and expenditure of the city of Edinburgh. It does not embrace a full year, and many of the Martinmas receipts and payments are included in the accounts, previous to the period when the present Council assumed the management. Many payments too that should have been made in the period of this account are necessarily in arrear, pending the discussions between the Council and the trustees for the city's creditors, the former being limited in the funds placed at their disposal, until it shall be ascertained what proportion may belong to them and to the creditors respectively. But although it were otherwise, it could serve no practical purpose, as regards the future, because this Abstract contains funds and revenues which belong to the creditors, and can no longer appear in the city's accounts; and it does not exhibit the reductions of salaries and allowances made by the present Council, which only take effect from the date at which this account closes. Until the rights of parties also are established, it would be useless to attempt to frame any view of the probable results to the creditors, in the ultimate division of the property. The gross revenues, however, and part of the proposed reductions, are stated on the margin.

It is only necessary to remark farther, that the principal accounts are prepared in the order of the Abstract, which was not formerly the case, by which arrangement it can be more readily seen what is expended in each department, than by being obliged to collate the payments scattered under different heads of the account. A separate account, under the head of "Petty Disbursements," was in use to be kept, which averaged, for the last five years, about 1,200*l.* per annum, and this was introduced into the annual accounts, in five or six slump sums, by which the nature of many considerable payments was not seen. It has been discontinued, and every payment now appears under its proper head in the principal account. There was also another head, titled, "Payments warranted by Acts of Council," in which disbursements of every description were introduced, and separated from the proper heads in other parts of the account, under which they should have appeared. These payments were seldom less than between 2,000*l.* and 3,000*l.* a year. This has also been discontinued. In the former accounts the expense of keeping up the causeways, repairs of property, aliment of prisoners in gaol, advances for college and churches, &c. were stated as casual payments. This led to much of the evil that has taken place; for whenever the expenditure exceeded the revenue, reference was made to a large sum of casual payments which would not likely occur again, although they always did occur. These payments are casual in their amount, but they are constant in their occurrence, and to such an extent as to render it dangerous to state them as casual. They are now included in the proper expenditure, and only such payments stated as casual as either from their nature cannot occur again, or only at very distant periods.

REVENUE.

REVENUE.

REVENUES, 1833–34. £. s. d.		Received during this Account. £. s. d.
7,401 – 11	1. Rents of seats in the city churches, (exclusive of 953 *l.* received previous to this account)	6,231 2 9
1,764 16 4	2. Assessment, in lieu of impost on wine, (exclusive of 270 *l.*, ditto)	974 – –
370 14 5	3. Astricted multures, payable by brewers, (exclusive of 66 *l.* 13 *s.* 2 *d.*, ditto)	304 1 $3\frac{3}{12}$
—	4. Shore dues, berthage and pontage; kept separate for payment of arrears to Government. (See p. 226.)	—
389 4 6	5. Dues on goods sent by Union Canal, (deducting collector's commission, at five per cent.	389 4 6
5,489 16 –	6. Market dues and petty customs, (exclusive of 30 *l.* paid previous to this account)	4,555 16 –
663 2 6	7. Compositions from city's vassals in non-entry	663 2 $6\frac{2}{12}$
5,888 15 9	8. Feu-duties in extended royalty, (exclusive of current feus in arrear,) £. 4,994 16 $-\frac{1}{12}$	
1,570 11 4	Feu-duties in ancient royalty, ditto – – ditto – 1,104 10 5	
20 10 10	Ditto Leith – – ditto – – ditto – 23 1 $4\frac{8}{12}$	
33 16 4	Ditto Canongate – ditto – – ditto – 23 18 $10\frac{8}{12}$	
8 19 10	Ditto Portsburgh – ditto – – ditto – 1 – $4\frac{3}{12}$	
186 13 4	Ditto City's mills, Water of Leith – ditto – 186 13 4	
	Sum Feu-Duties, exclusive of compositions – –	6,334 – $4\frac{8}{12}$
1,647 2 11	9. Rents or tack duties of houses, grounds, &c.; viz. Without the city, (exclusive of 171 *l.* 10 *s.* paid previous to this account) – 969 3 6 Within the city, (ditto of 12 *l.* 10 *s.* ditto, ditto) – 254 16 8	1,224 – 2
—	10. Dividends on stock in public companies; viz. On 1,200 shares of Water Company, (given up to Bank of Scotland, in virtue of their preferable security for advances to city) –	—
138 – –	On 60 shares Glasgow Union Canal –	138 – –
—	On 1,000 *l.* of shares Waterloo Tavern, (no dividend since 1824)	—
8 6 8	On Edinburgh Friendly Insurance shares –	8 6 8
50 – –	On 20 shares Edinburgh and Dalkeith Railway, 1,000 *l.* (given up to creditors, and sold by them for 1,300 *l.*) –	50 – –
	Sum Dividends – – –	196 6 8
20 – –	11. Annual allowance from gas companies for superintending pipes, (20 *l.* outstanding.)	10 – –
	12. Interest on bonds and debts due the city; viz.	
292 3 4	On 7,304 *l.* 8 *s.* $11\frac{6}{12}$ *d.* due from ale duty – –	—
175 9 11	On 4,387 *l.* 8 *s.* 8 *d.* due by charity workhouse –	175 9 11
	Sum Interest – – –	175 9 11
366 14 8	13. Dues of entry of burgesses and guild-brethren, per separate dean of guild account	366 14 8
90 – –	14. Rents from property at wet docks, acquired by the city on account of arrears of feus, &c. due at 1826	90 – –
£.26,575 19 7	– – Exclusive of Leith dues.	
	Sum of proper Revenue received – – £.	21,513 18 $10\frac{1}{12}$
	15. Casual revenue or receipts; viz.	
	1. Repayment to account of advances for steam-tug – £. 172 7 3	
	2. Price of lot of St. John's burying-ground, (the remainder given up to creditors, and sold for 1,400 *l.*) 35 10 3	
	3. Repayment of law expenses, regarding extension of royalty – 9 3 9	
	4. Drawbacks on timber and glass used in altering High and Tolbooth Churches – 797 12 1	
	5. Interest on arrears of feu-duties – 15 16 5	
	6. Interest from Bank of Scotland on deposits – 38 9 11	
	7. Arrears of feu-duties from vassals not previously in the rental – 24 12 10	
	Sum of Casual Revenue – – –	1,093 12 6
	16. Sums deposited or received, to be accounted for to others; viz.	
	1. Deposit in security of impost on wine – 50 – –	
	2. Cash for King's Plate run for at Musselburgh, 105 *l.*; less fees, 8 *l.* 2 *s.* – 96 18 –	
	Sum of these – – –	146 18 –
	TOTAL RECEIPTS – – – £.	22,754 9 $4\frac{1}{12}$

(continued)

EXPENDITURE.

Proposed Reductions. £. s. d.		£. s. d.
	I. Ecclesiastical Department, exclusive of Ministers' Stipends:	
64 – –	1. Salaries, 3-4ths year to precentors, 265 *l.* 13 *s.*; pensions to ditto, 8 *l.* 15 *s.*	274 8 –
26 14 –	2. Bell-ringers, &c. 118 *l.* 11 *s.*; beadles, 68 *l.* 18 *s.*; cleaners, 119 *l.* 11 *s.*; lighters of stoves, &c. 42 *l.* 9 *s.* 6 *d.*	349 9 6
	3. Sacramental expenses, (bread for November 1833 and May 1834, and wine for 1833, in arrear)	50 – –
	4. Feu-duty, Lady Yester's church, 80 *l.*; insurances, 74 *l.* 5 *s.*; water-duty, 6 *l.*	160 5 –
	5. Repairs on churches, 48 *l.* 7 *s.*; furnishings to ditto, 4 *l.* 9 *s.* 1 *d.*	52 16 1
	6. Coals and porterage, 42 *l.* 18 *s.* 6 *d.*; lighting St. Mary's, 6 *l.* 17 *s.*	49 15 6
	7. Rent of Methodist chapel for New North Church congregation	500 – –
	Sum proper Expenditure £.	1,436 14 1
	8. Casual payments: Call and ordination of ministers £. 12 3 –	
	Advance to mortality recorder to pay beadles 70 – –	
	Removing wood to allow foundation of churches, Castle Hill, to be laid 5 5 –	
	Balance of Mr. Baxter's contract for glazier work to St. Giles' 70 7 8	
	Sum Casual Payments	157 15 8
	Sum Ecclesiastical Expenditure £.	1,594 9 9
	II. Department of Education.	
	1. College of Edinburgh:	
	Salaries and allowances to principal, professors, librarian, botanical garden, and for anatomical museum, (annual amount, 1,019 *l.* 13 *s.* 10 *d.*) £. 321 17 3	
	Payments to bursars to account, (annual sum, 420 *l.* 18 *s.* 2 $\frac{8}{12}$ *d.*) 193 5 9	
	Insurance, 19 *l.* 15 *s.*; furnishings and repairs, 1 *l.* 10 *s.* 21 5 –	
	Salary and allowance to keeper of mortality records, (annual sum 43 *l.* 6 *s.* 8 *d.*) 36 13 4	
	Stipends to ministers of Sprouston and Livingston, (19 *l.* 8 *s.* 10 *d.*) 11 2 2	
	Sum Expenditure £. 584 3 6	
	Less, College revenue, received by chamberlain, viz.	
	Interest on bonds placed on ale duty (2,814 *l.* 8 *s.* 10 *d.* due) £. 261 17 $7\frac{10}{12}$	
	Mortcloth dues 120 18 6	
	Compositions paid by vassals 28 – –	
	Ground annuals, feu and teind duties, exclusive of 38 *l.* 17 *s.* $9\frac{1}{12}$ *d.*, paid previous to this account 24 18 $9\frac{11}{12}$	
	Sum received 435 14 $11\frac{9}{12}$	
	Sum advanced beyond Revenue 148 8 $6\frac{3}{12}$	
	2. High School:	
	Salaries to rector and four masters (113. *l.* 6 *s.* 8 *d.* in arrear), and to janitor 6 13 4	
	Premiums 68 *l.* 12 *s.*; repairs 1 *l.* 7 *s.* 9 *d.*; insurance 5 *l.* 8 *s.* 75 7 9	
	Sum for High School 82 1 1	
40 – –	3. English Schools:	
	Salaries to two teachers (40 *l.*) 20 *l.*, premiums 4 *l.* 10 *s.* 24 10 –	
	4. Free School, Niddry-street:	
	Salary to teacher, three quarters 26 5 –	
	Prizes 4 *l.*; confections at examination 2 *l.* 5 *s.* 6 *d.*; cleaner, three quarters, 4 *l.* 10 *s.*; repairs 12 *s.* 11 7 6	
	Sum for Free School 37 12 6	
	Sum for Education	292 12 $1\frac{3}{12}$
	III. Criminal Department.	
	1. Calton Gaol and Lock-up House:	
	Salaries, three quarters to governor, 187 *l.* 10 *s*; chaplain, one half year, 40 *l.*; precentor, three quarters, 4 *l.* 14 *s.* 6 *d.* 232 4 6	

Proposed Reductions £. s. d.		£. s. d.	£. s. d.
	Salaries to teacher, gaol, three quarters, 18*l.* 15*s.*; teacher, lock-up house, 5*l.*; clerk, 11 months, 11*l.* 11*s.* -	35 6 –	
	Ditto to turnkeys, keeper of lock-up house, matron, and watchman, nine months - - - - - -	325 1 6	
	Sum Salaries - -	592 12 –	
	Aliment to prisoners sent to gaol for offences, nine months	315 12 7	
	Coals and cartage, 49*l.* 10*s.* 10*d.*; blankets, 32*l.* 3*s.* -	81 13 10	
	Sum Expenditure - -	989 18 5	
	Less, Gaol fees, booking debtors, &c. - - - -	86 15 11	
	Remains Expenditure for Edinburgh Gaol -	903 2 6	
	2. Public executioner, 44 weeks' salary, 10*s.* - - -	22 – –	
	3. Canongate Gaol, viz.		
	Keeper's salary, three quarters, 112*l.* 10*s.*; precentor, one year, 2*l.* 2*s.*; servants, 39 weeks, 40*l.* 19*s.* - - - - £. 155 11 –		
	Coals, 4*l.* 18*s.* 6*d.*; candles, and oil 1*l.* 4*s.* 5*d.*; sundries, 5*l.* 2*s.* 7*d.* 11 5 6		
	Repairs - - - - - - - 5 3 9		
	Sum - 172 – 3		
	Less, Gaol fees 21 6 6		
	Remains for Canongate Gaol	150 13 9	
	4. Bridewell:		
	For aliment of prisoners, after deducting their labour - -	100 11 4	
	5. Criminal prosecutions before procurator-fiscal, viz.		
	To fiscal's accounts - - - - 87 13 5		
	Clerks of court, fees - - - 22 8 6		
	Officers, including 5*l.* 8*s.* for watching prisoner in infirmary - - - 20 4 10		
	Sum for criminal prosecutions from Nov. 1833 to June 1834 -	130 6 9	
	Expenditure in Criminal Department		1,306 14 4
	IV. Constabulary and Preserving the Peace.		
50 – –	One year's allowance to high constables to Nov. 1833 -	50 – –	
	Medicines and attendance on constables hurt on public duty	5 12 –	
	Bill at Paxton's Tavern on night of 31 Dec. 1833 (the only tavern bill in the account) - - - - - - -	5 – –	
	Sum of these		60 12 –
	V. Civil Department of the Municipal Government.		
	1. Salaries, viz.		
500 – –	To the lord provost, formerly 1,000*l.*, now 500*l.* (resting)	—	
26 19 11	Usual annual allowances to provosts, magistrates, council-deacons, and dean of guild, in all, 26*l.* 19*s.* 11*d.* -	—	
350 – –	Chamberlain (formerly 800*l.*, reduced to 450*l.*), three quarters old salary - - - - - - - -	600 – –	
	Clerks in chamberlain's office, three quarters (cess-office department to be conjoined with chamberlain's, by which a large reduction will be effected) - - - -	339 14 8	
20 16 –	Two collectors of feus at 19*s.* and 15*s.* per week, (reduced to 13*s.*) and allowance for rent, 44 weeks - - -	86 15 9	
	Principal clerks, one half year, 70*l.*; depute ditto 73*l.* 12*s.* 2*d.*; keeper of council records, three quarters, 131*l.* 12*s.* 7*d.* - - - - - -	275 4 9	
15 1 11	Dean of guild clerk, salaries and commission on burgess money - - - - - - - - - -	15 1 11	
	Clerk of Canongate, usual per-centage on compositions in Canongate - - - - - - -	28 15 2	
150 –	Superintendent of public works, (reduced from 500 *l.* to 350 *l.*) three quarters old salary - - - -	375 – –	
30 17 –	Housekeeper and servants, council chamber, (reduced from 115*l.* 17*s.* to 85*l.*) one-half of old salary - -	57 18 6	
	City assessors, (to be reduced from three to one, at *l.*), one-year old ditto - - - - - - -	255 – –	

(*continued*)

Proposed Reductions. £. s. d.		£. s. d.	£. s. d.
22 6 –	Annual allowances to auditor, macers, &c. Court of Session, (22 *l.* 6 *s.* discontinued)	—	
42 17 6	Wardrobe keepers, mace and sword-bearers, (reduced from 63 *l.* 17 *s.* 6 *d.* to 21 *l.*) three quarters old salary	48 17 6	
65 – –	City officers, 44 weeks' salary and allowances, 192 *l.* 8 *s.* 4 *d.*; provost's officer, three quarters, 39 *l.*; convenery, ditto &c. 1 *l.* 10 *s.*; carrying processes from guild court, 4 *l.* (all extras abolished)	236 18 4	
	Ditto for clothing, 42 *l.* 8 *s.*; shoes, 8 *l.* 8 *s.*	50 16 –	
	Constable of meadows, three quarters, 22 *l.* 10 *s.*; ditto of Newhaven, 10 months, 9 *l.*	31 10 –	
	Inspector of markets, three quarters, 40 *l.* 19 *s.*; ditto of weights, 18 *l.* 15 *s.*; clerk of weigh-house and corn-market, 39 *l.* 5 *s.* 7 *d.*	98 19 7	
10 – –	Music bells player, three quarters, 30 *l.*; allowances at election of magistrates and King's birth-day, 1 *l.* 11 *s.* 6 *d.*	31 11 6	
	Petty salaries and regular annual allowances	9 1 1	
50 – –	Magistrates of Leith, usual allowance for public expenses, 50 *l.* —		
50 – –	Assessor of Leith, 50 *l.* —		
	Town clerk, salary 30 *l.*, per-centage on compositions, 21 *l.* 12 *s.* 4 *d.* 51 12 4		
25 – –	Two officers of Leith, (reduced from 40 *l.* to 15 *l.*) three quarters old salary 30 – –		
	Sum for Leith	81 12 4	
5 10 –	Usual fees at auditing accounts, (7 *l.* 3 *s.* 4 *d.*)	—	
1,545 2 4	Sum, Salaries and Allowances	£.2,622 17 1	
	2. Payments for charitable purposes, viz.		
	Pensions to old servants, &c. £.133 4 4		
	Do. to Edinburgh and Leith Humane Society 5 5 –		
	Sum	138 9 4	
	3. Expenses attending election of counsellors at polling places, (exclusive of 36 *l.* paid before)	40 2 2	
	4. Law suits —		
	Agency for contract with Leith Gas Company £.6 15 10		
	—City clerks for fees to counsel, &c. 150 – –		
	156 15 10		
	Parliamentary expenses, Cunningham & Bell, balance for Community Estates Bill £.462 8 11		
	Spottiswood & Robinson, do. 597 13 10		
	Casual 1,060 2 9		
	Sum	1,216 18 7	
	5. Repairs; viz.		
	Expense of causeways in ancient and extended royalties 839 11 2		
	Annual contribution (five years to run) for repairing road between Bonnington and Leith Walk 16 13 4		
	Repairing and improving meadows 6 9 –		
	Markets, 1 *l.* 7 *s.* 6 *d.*; city chambers, 1 *l.* 11 *s.* 4 *d.*; sundry properties, 2 *l.* 18 *s.* 4 *d.* 5 17 2		
	Sum Repairs	868 10 8	
	6. Expense of drains, retaining walls, &c., proportion of drain, Albany-street	18 3 5	
	7. Feu-duties payable by city:		
	To Heriot's hospital for extended royalty, St. Leonards and Broughton, two years, viz. crop 1832, 768 *l.* 19 *s.*; crop 1833, 729 *l.* 13 *s.* $2\frac{6}{12}$ *d.* £.1,498 12 $2\frac{6}{12}$		
	To Duke of Portland, for lands of Bellevue 1,050 – –		
	To Lord Alva's heirs, for ground in extended royalty 307 9 –		
	To Leslie Moodie, grounds in Broughton 48 9 –		
	To Charity workhouse, for Forglen's Park 10 – –		

Proposed Reductions.		£.	s.	d.	£.	s.	d.	£.	s.	d.
	To kirk-session, South Leith, six years, 14 *l.* 17 *s.* 6 *d.*; Keir-street, 5 *l.*; shore-dues office, 4 *l.*	23	7	6						
	Redhall garden, 7 *l.* 10 *s.*; ground at docks, 8 *l.*; West Church glebe, 5 *l.*, in arrear.	—								
	Sum Feus on City's Property				2,937	17	$8\frac{6}{12}$			
	Composition to Heriot's Hospital for lands in extended royalty, casual				286	5	–			
	8. Taxes, and other annual burdens, viz.									
	Improvement, cess, police taxes, and poor rates	£. 48	3	$1\frac{9}{12}$						
	Ministers' stipends, South Leith, West Church, and Canongate	24	6	2						
	Missive dues to convention of royal burghs	166	13	4						
	Charity workhouse, per stipulation on extension of royalty in 1809	200	–	–						
	Burgh mails, two years	10	–	–						
	Rents: Session clerk's office, (now given up) 20 *l.*; sheep bughts, one half year, 12 *l.* 10 *s.*; part of old Physic Garden, 2 *l.* 9 *s.*	34	19	–						
	Insurances on Corn-market, city chambers, Cowgate, Leith gaol, &c.	22	1	–						
	Water-duty	13	2	6						
	Sum of these				519	5	$1\frac{9}{12}$			
	9. Furnishings, coals, stationery, &c. to city chambers, viz.									
	General furnishings, 9 *l.* 10 *s.* 3 *d.*; coals, candles, wood, &c. 45 *l.* 6 *s.* 10 *d.*	54	17	1						
	Stationery and books, 37 *l.* 3 *s.* 1 *d.*; printing, 1 *l.* 8 *s.*; advertisements, 14 *l.* 11 *s.*	53	2	1						
	Newspapers, 10 *l.* 3 *s.* 3 *d.*; stamps for feu receipts, &c. 8 *l.* 14 *s.* 9 *d.*	18	18	0						
					126	17	2			
	10. Petty disbursements, including chamberlains, per book, 14 *l.* 12 *s.* 5 *d.*; porterage of robes to churches, &c. 3 *l.* 5 *s.* 6 *d.*; coach hires, 3 *l.* 9 *s.* 6 *d.*				23	17	–			
	11. Casual payments, exclusive of those specified above—King's plate, 105 *l.*; medal to archers, 5 *l.* (for 1833); Commission to A. Bruce for compositions, 8 *l.* 1 *s.* 8 *d.* &c.				124	16	8			
	Payments in Civil Department							8,923	19	$11\frac{3}{12}$
	12. Annuities paid at and previous to 25 November 1833:									
	1. To annuitants by purchase	£. 76	10	–						
	2. To annuitants on sums mortified	11	5	–						
					87	15	–			
	13. Interest to creditors by bond or bill at and preceding, do.				975	–	5			
	14. Payments to trustees for city's creditors, to enable them to pay interests and annuities				3,880	10	3			
	15. Payment to the ministers of Edinburgh their stipends as due at Candlemas, by authority of trustees, (afterwards arranged that the ministers should rank for half of the sum)				2,740	11	8			
	16. Payments to the Bank of Scotland to account of old balance due them, viz.									
	Balance due the Bank of Scotland at 13 Nov. 1833, (exclusive of interest)	£. 38,750	–	–						
	Balance due the Bank of Scotland at 25 Nov. 1833, (exclusive of interest)	38,040	–	–						
	Difference paid by Chamberlain				710	–	–			
	Sum of these Payments							8,393	17	4
	Sum of Expenditure							20,572	5	$5\frac{6}{12}$
	Amount of Receipts brought from page 215							22,754	9	$4\frac{1}{2}$
	Amount of Expenditure as above							20,572	5	$5\frac{6}{12}$
	Excess of Receipts over Payments						£.	2,182	3	$10\frac{7}{12}$
	Whereof in bank				£. 2,176	12	2			
	But it is proper to state that there are debts incurred during this account which are still unsettled, to the extent of				1,126	7	5			
	Also allowance to Lord Provost				500	–	–			
	Salaries to rector and masters of High School				113	6	8			

(*continued*)

	£.	s.	d.
Salaries to professors, bursars, &c. amounting to many hundred pounds, which would more than exhaust the above sum in the bank. It may be asked why these accounts and salaries should remain unsettled while such a sum is in the hands of bankers? The answer to this is, that the council has not the control of that fund, being interpelled by the trustees for the city's creditors from expending beyond a certain amount till their respective rights are ascertained.			
Besides the proposed reductions specified above on the margin, and which will come into operation in the next accounts - - - - - - - - - - - - - -	1,545	2	4
There may be also noticed,			
Reduction of salary and allowances to collector of shore-dues, about - £. 200 - -			
The shore-master at Leith - - - - - - - - - - 130 - -			
The reduction of the Cess-office establishment, and its conjunction with the Chamberlain's department, the saving not exactly ascertained, but it must amount, exclusive of Chamberlain and runners, above noticed, to 500*l.* or - - - - - - - - - - - 600 -			
The Bulker's office at Leith, about - - - - - - - 300 - -			
The City Accountant.—The arrangement regarding this branch not yet decided on, but in any event, by far the greater part of the former large expenditure under this head may be saved.			
Amounting in all to more than 3,000*l.* per annum, besides other reductions on the various branches of expenditure.			

II.—GENERAL VIEW OF THE DEBTS, PROPERTY AND REVENUES OF THE CITY OF EDINBURGH.

I.—Debts Due by the City.

	£.	s.	d.
Amount due on bonds and bills, as exhibited in proper revenue account, made up to 14th September 1833 - - - - - - - - - - - - - -	312,146	17	4
Ditto - on bills granted for open accounts, between 14th September and 13th November 1833 - - - - - - - - - - - - - -	1,129	8	9
Ditto - on bills granted for open accounts by the present council, in November 1833, as vouchers for debts incurred prior to October 1832 - - - - - -	270	10	2
Sum on bonds and bills for ordinary debts - - -	313,546	16	3
Ditto - on bonds for sums mortified for promotion of mineralogy - - £. 1,511 4 2			
And for annual sermon on cruelty to animals - - - 200 - -			
	1,711	4	2
Ditto - on 2,028*l.* 7*s.* 2*d.* life annuities (Carlisle table, 4 per cent.) as valued in the last printed abstract - - - - - - - - - - - -	13,077	9	8
Balance due to Bank of Scotland on cash account fitted 25th November 1833 £. 38,040 - -			
This debt may be considered as extinguished. The Bank held a preferable security, before the Community Estates Bill passed, over 1,200 shares of the Edinburgh Water Company. The Bank has already sold part of these shares at 32*l.* 5*s.* each; and assuming that the remainder will sell at the same price, the produce would be - - - - - - - - - 38,700 - -			
Dividends have been received by the Bank, but on the other hand, interest is due on the debt, besides the expenses attending the disposal of the stock. In the mean time it may be held as settled.			
Balance due the Bank of Scotland on cash account for the Leith Docks, at 25th Nov. 1833 -	6,700	-	-
Balance of subscription for road and bridge over Calton-hill - - - - - -	1,150	-	-
Debts due on open accounts, contracted prior to 1st October 1832 - - £. 2,556 18 9			
Debts due on - ditto - - ditto - between 1st October 1832 and 13th November 1833, when the present council came into office - - - - 2,833 10 4			
	5,390	9	1
Debts due on open accounts, incurred from 13th November 1833 to 13th September 1834, by the present council (exclusive of debt to Graham and Anderson, W. S., compensated by arrears of rents, &c. recovered by them) - - - - - - - - £. 1,126 7 5			
Arrears of salaries to Lord Provost, 500*l.*; masters of High School, 113*l.* 6*s.* 8*d.*; professors, bursars, &c.			
These debts are not extended here, as there is a balance of 2,176*l.* 12*s.* 2*d.* in the hands of bankers, exclusive of arrears of feu-duties and rents outstanding, which more than compensates them.			
Sum ordinary debts ascertained - - - £.	341,575	19	2
Besides the above, there has been lodged with the trustees, additional claims, including dock committee of Leith, 3,037*l.* 1*s.*; George Crichton and others, for overcharges on dues at Leith, 6,043*l.* 7*s.* &c., to the amount of - - - - - - £. 19,881 11 -			

	£. s. d.
And claim by the guildry for entry money of guild brethren, &c., received by the city since 1778 (exclusive of interest) - - - - - - £. 12,000 – –	
Ditto by the Improvement Commissioners on account of the City's obligations regarding the sites of the churches proposed to be built on the Castle-hill, no sum stated, (*see* claim by City against them, for 3,217 *l.* 3 *s.*, p. 224.)	
As most of the above claims are disputed, and others not ascertained, they are not included in the mean time, but stated to be kept in view.	

II.—Debts Charged on the Ale Duty, under Act 38 Geo. 3, c. 54.

Amount of principal sums due on bonds - - - - - - - £. 72,910 – –		
Less, debt to proper revenue of the city - - - - - - - 7,304 8 11 $\frac{2}{12}$		
Remains - - -		65,605 11 – $\frac{10}{12}$
Note 1.—The above sum due to the proper revenue is exclusive of sums advanced in aid of the deficiencies of the duty in 1831 and 1832 - - - £. 1,800 – –		
Ditto advanced to magistrates of Leith for the streets and police thereof, 210 *l.* per annum, a burden on the ale duty from 1799 - - - - - 7,217 13 5		
£. 9,017 13 5		
Note 2.—There are besides considerable arrears of interest due to the college, stipends, equivalents, &c. amounting to nearly 4,000 *l.*, which the ale duty has been insufficient to answer; but whether these arrears may form claims against the city funds or not, has yet to be ascertained.		
Sum of Debts due by the City, so far as ascertained, exclusive of engagements stated below £.		407,181 10 2 $\frac{10}{12}$

III.—Engagement by the City on Account of the Leith Docks.

	£. s. d.	£. s. d.	
Bond and assignment of harbour and dock properties to Barons of Exchequer for advance by Government, under Act 45 Geo. 3, c. 114 - - - - - - - - - -			25,000 – –
Ditto and ditto of ditto under Act 6 Geo. 4, c. 103 - -	- - -	240,000 – –	
Less, extinguished by operation of the sinking fund, as at 1st March 1832 - - - - - -	19,007 5 –		
Payments to account of interest and sinking fund from 25th September 1833 to 22d August 1834 - - - - - £. 15,525 – –			
Whereof to sinking fund - - - -	4,522 9 –		
In all to sinking fund - - -		23,529 14 –	
Balance of 240,000 *l.* bond - - -			216,470 6 –
Making together balance of principal due on bonds - - - £.			241,470 6 –

With one year's interest, including payment to sinking fund, due as at 1st September 1834, 10,350 *l.* sterling.

Note.—These sums are chargeable, in the first instance, on the Leith Dock Estate; but the city is bound to supply any deficiency of the dock revenues for the interest and sinking fund to the Exchequer. The dock dues have never been sufficient to meet these, and the city has accordingly advanced, since the said Acts were passed, the following sums:—

1st, Advances preceding 13th November 1833 - - - -	£. 23,700 – –
2d, Ditto - on 3d April and 22d August 1834, from shore dues, &c. -	4,600 – –
Sum, besides interest - - -	£. 28,300 – –

Which forms a postponed burden on the docks, after the debt to Government is paid off. The balance of the debt to Government is not included in the debts due by the city, because Government is preferably secured over the docks, shore-dues, berthage and pontage, the produce of all which is considerably more than sufficient to meet the interest and payment to the sinking fund. The above is exclusive of advances for drawbridges and steam-tug, noticed afterwards.

IV.—Cautionary Obligations and Engagements.

1. Guarantee on account of the Water Company, to the proprietors of mills and lands on various streams and courses, come under by the city when the Crawley Spring was carried into Edinburgh, to the extent of - - - - - - - - - - - - 50,000 – –
   It is not thought that this obligation is likely at any time to affect the city's funds.
2. Annuity of 21 *l.* to John Aitken, in consideration of his having executed a disposition to certain property at the docks, Leith, for arrears due by him at Whitsunday 1827. The property has not yielded as much lately as paid the annuity, feu-duty, &c.

(*continued*)

	£. s. d.
Agreement with the Presbytery of Edinburgh, to endow St. Stephen's Church, by uncollegiating the Tolbooth Church, in consequence of which the late magistracy, by Act of Council, of 22d November 1828, became bound to erect two new churches in the Old Town, instead of one required by the Act 8 Geo. 4.	
By minute of sale, as agreed to in Council, 20th October 1830, the late magistracy contracted with the Improvements' Commissioners for the site of two new churches, to be named John Knox's Churches. The value to be fixed either by feu-duty or price, in terms of Act of Parliament, by arbiters.	
Engagement to erect a new debtors' gaol, at an expense of not less than 9,000 *l.*, on receiving 5,000 *l.* from the county, and balance of funds in the hands of the gaol Commissioners, difference not exceeding - - - - - - - - - - - - - -	4,000 – –
No cautionary engagements during the period of this account.	

V.—Property, Heritable and Moveable, and Revenues of the City.

Heritable Property, yielding Rent:

The former valuations have been revised by a professional committee of the Town Council, in conjunction with the Superintendant of Public Works.

	£. s. d.	£. s. d.
1st. *Feu-duties.*—Extended royalty (entries taxed) 1833–34 - - -	5,888 15 $9\frac{6}{12}$	
Add for feuars who have not taken out charters - -	186 7 $3\frac{9}{12}$	
Sum extended royalty - - - £.	6,075 3 1	
Ancient royalty (entries, with few exceptions, untaxed)	1,570 11 $4\frac{4}{12}$	
Leith - (entries untaxed) - - - - - -	20 10 $10\frac{5}{12}$	
Canongate - (ditto) - - - - - - -	33 16 $4\frac{7}{12}$	
Portsburgh - (ditto) - - - - - - -	8 19 $10\frac{5}{12}$	
The three last embrace about 600 feus.		
Mills at Water of Leith - - - - - - -	186 13 4	
Amount of feu-duties - - - £.	7,895 14 $10\frac{1}{2}$	

But the above feu-duties are subject to the following burdens:

	£. s. d.	£. s. d.
(1.) Perpetual annuity or feu-duty to the Duke of Portland and heirs, for the lands of Bellevue -	1,050 – –	
(2.) Feu-duty to Lord Alva's heirs, for ditto in extended royalty - - - - - - - -	307 9 –	
(3.) Ditto to George Heriot's Hospital for d° in d° viz.: Money feus - - - - £. 32 11 9 Grain ditto on average of five years 774 2 –	806 13 9	
(4.) Ditto to charity workhouse, for Forglen's-park -	10 – –	
(5.) Ditto to Leslie Moodie, for Broughton - -	49 19 –	
(6.) Ditto to Exchequer, for Canongate and Leith -	3 5 –	
It may be noticed that the houses, east end of Princes-street and West Register-street, are exempted from local taxes, which, by agreement with the original proprietors, have been paid by the City. The taxes paid by the City on this account have averaged for the last five years 151 *l.* per annum. Whether these may be burdens on the feu-duties, or merely ordinary claims against the general estate, has yet to be ascertained. It is right in the mean time to keep them in view.		
There is also a payment of 200 *l.* per annum to the charity workhouse per stipulation at the extension of the royalty, which, however, may be held as compensated by the claim against charity workhouse of 4,387 *l.* 8 *s.* 8 *d.*, at p. 224.		
Deduct these burdens - - - - - -	2,227 6 9	
And there remains of free feu-duties - - - £.	5,668 8 $1\frac{4}{12}$	
Exclusive of compositions which, on an average of the last five years, have amounted to 862 *l.* 2 *s.* 6 *d.* per annum.		
Valued at 23 years' purchase - - - -	- - -	130,373 6 $6\frac{8}{12}$

Note.—They were formerly valued at 25 years' purchase, without deducting the burdens, which gave a capital of 197,615 *l.* 17 *s.* 6 *d.*

	Rentals. £. s. d.	Value. £. s. d.	£. s. d.
2d. *Lands, Houses, &c. without the City, on Rentals*, 1833–34:			
1. Meadows (42 acres Scots) stripes and small feus, at 23 years	411 5 –	9,458 15 –	
2. Burntisfield-links (about 27 acres Scots) at ditto	80 – –	1,840 – –	
3. Flesh-market, Leith	83 5 5	1,915 4 7	
4. Garden at Redhall, 3 Scots acres, near Leith mills, considered very valuable, from its proximity to the water of Leith, and its eligibility for a manufactory, &c., subject to a feu-duty of 7 *l.* 10 *s.*, valued at	– – –	1,800 – –	
5. Areas and yard at the Bush, Leith, at 12 years	270 – –	3,240 – –	
6. Areas on sea-shore, near glasshouses, at 25 years	18 – –	450 – –	
7. Oyster scalps, Newhaven (under-let at 25 *l.*) and parts of Beach, at 25 years	31 – –	775 – –	
8. Shore-dues Office, Leith, 60 *l.*, less feu-duty, 4 *l.* at 14 years	56 – –	784 – –	
9. Three houses, Keir-street, 17 *l.* 19 *s.* less feu-duty, 5 *l.* at 12 years	12 19 –	155 8 –	
10. Small house, Greenside, at 12 years	7 – –	84 – –	
11. Seats in West Church and South Leith, at 20 years	3 6 4	66 6 8	
Valuation of property without the city	– – –		20,568 14 3
3d. *Lands, Houses, &c. within the City:*			
1. Houses, shops, vaults, cellars and stables, at 12 years	173 4 –	2,058 8 –	
2. Princes-street gardens, west, let on a 99 years' lease, at 23 years	50 – –	1,150 – –	
3. Princes-street gardens, east, let for 28 years; with a break every seven, at 25 years	30 – –	750 – –	
4. Angle of ground, Albany-street, sold by trustees for	– – –	750 – –	
5. Stripes and angles, various places, stalls in Greenmarket, &c. at 15 years	84 3 2	1,262 7 6	
6. 106 lots burying ground, St John's Chapel, Princes-street, sold by trustees for	– – –	1,400 – –	
Valuation of property within the city	– – –		7,370 15 6
Sum of heritable property yielding rent, carried to Abstract, p. 225			£. 158,312 16 3 $\frac{8}{12}$

		£. s. d.
2. Heritable Property yielding no Rent, viz.:		
228 lineal feet feuing ground, Fettes-row and Royal-cresent, at 8 *s.* per foot, 15 years	91 4 –	1,368 – –
50 lineal feet feuing ground, foot of Duncan-street, east side, at 5 *s.*, 15 years	12 10 –	187 10 –
810 ditto – – ditto north half Bellevue-crescent, Cornwallis-place and east division of Royal-crescent, at 8 *s.*, 15 years	324 – –	4,860 – –
940 lineal feet stable ground, behind Bellevue-crescent, at 2 *s.* 6 *d.* per foot, at 15 years	117 10 –	1,762 10 –
Stances on earthen mound, valued on probable revenue for temporary purposes, at 15 years	50 – –	750 – –
850 feet feuing ground at Greenside, for workshops, at 2 *s.* per foot, at 15 years	85 – –	1,275 – –
1,480 feet, north-east side of Leith Links, valued on the rental for rope walks, the prospect of feuing being remote, at 30 years	60 – –	1,800 – –
Ground at Leith Sands, in the line of the railroad, 10 imperial acres	– – –	1,000 – –
Whinstone Quarry, at Bell's Mills	– – –	200 – –
Ground to the east of Calton Burying-ground, 3 roods 22 poles, imperial	– – –	750 – –
Store-cellar and gibbet-house under North Bridge, wrights' shops, &c.	– – –	412 – –
Angle of ground, south-east of sea beach, Wardie Burn, (right disputed)	– – –	100 – –
Ground in Leith Links, above 40 imperial acres, eligible for garden or nursery, at 7 *l.* per acre, 20 years' purchase	– – –	5,600 – –
Pleasure ground, Calton-hill, about 20 imperial acres	– – –	3,000 – –
Sum of heritable property yielding no rent, carried to Abstract, p. 225		£. 23,065 – –

Moveable Property.

1st. Moveable Property at present Productive:	
1,200 shares of Joint Stock Water Company, at 32 *l.* 5 *s.*, given up as already explained to Bank of Scotland, in virtue of their preferable security for advances to the extent of 38,000 *l.*, besides interest, which it is thought the shares will liquidate	—
Shares in Edinburgh and Glasgow Union Canal, cost, with 2,760 *l.* of additional calls, 5,760 *l.*, suppose original cost	3,000 – –
Policy No. 1,262, with Friendly Insurance Company, on property Luckenbooths, dividend 8 *l.* 6 *s.* 8 *d.*, with occasional bonuses, 25 years' purchase	208 6 8
Stock in Edinburgh and Daikeith Railway, cost 1,000 *l.*, sold by trustees for	1,300 – –

	£.	s.	d.
Debt due by Edinburgh charity workhouse	4,387	8	8
There is a sum of 200 *l.* per annum payable by the City, which may be set against this claim.			
Advances on drawbridges and other public works at Leith, under Act 47 Geo. 3, in repayment of which the City is entitled to receive the pontage dues, which however, in the mean time, are set apart till the arrears to Government are paid up £. 28,759 9 10			
Add for deficiency of receipts, hitherto to pay interest 2,434 – $4\frac{6}{12}$			
	31,193	10	$2\frac{6}{12}$
The receipts from the pontage since September 1833, have been 1,040 *l.*			
Arrears, exclusive of interest, due by feuars and tenants of the dock estate prior to 1806, in security of which certain heritable properties have been made over to the city. (90 *l.* has been received this year, and 110 *l.* the preceding year)	1,330	15	–
Balance of advance to Harbour and Dock Commissioners for a steam tug, exclusive of interest. (Repayments are made every year, of which this year 172 *l.* 7 *s.* 3 *d.*)	1,467	12	9
Sum of these £.	42,887	13	$3\frac{6}{12}$

2d. Moveable Property Unproductive:

Stock in Waterloo Hotel (no dividend since 1824) £.	1,000	–	–
Sums advanced for common sewers, cellars, mutual gables, &c. to be repaid by vassals on taking out charters	3,690	7	8
Balance due by South Bridge trustees	1,885	9	–
Debt due by Kinghorn Ferry trust	500	–	–
Claim against Commissioners for Improvements for advances, (including 500 *l.* on account of unemployed workmen)	3,217	3	–
Note.—They have lodged a claim against the City for the value of the sites of churches proposed to be built on Castle Hill.			
Claim against Sommerville and Turnbull for expenses of rebuilding house to executioner	85	–	–
Balance of advances in aid of deficiency of Leith Dock revenue, for payments to Government, and which forms a postponed burden upon the dock dues, as at September 1833 £. 23,700 – –			
Add advances in 1834 4,600 – –			
	28,300	–	–
Also expenses incurred prior to Whitsunday 1827 on bridge below Leith Mills, struck off in the mean time by the Harbour and Dock Commissioners from the charge on pontage, &c.	8,214	10	1
Debt due by the British Fisheries, for subscriptions by the City in 1790, part of which is expected to be soon paid	500	–	–
Sum of these			–
	47,392	9	9
The arrears of revenues outstanding at 13th September 1834, are shown in the Appendix. Part of them are irrecoverable, and part in the course of collection.			
Sum of moveable property carried to Abstract, p. 225 £.	90,280	3	$-\frac{6}{12}$

It would tend to encourage extravagant hopes, if the above branch were allowed to be mixed with the city's assets, without some explanation. The claims have been stated at their full amount. Some of them are disputed, and some may suffer abatement, whilst the claims against the Leith docks and other works, amounting to 70,506 *l.* 8 *s.* or more than three-fourths of the whole, being contingent on the settlement of the large debt to Government, must be postponed to such a distant period, as to render it useless to calculate on them for present or available purposes. Were the claims, therefore, in the above branch valued with a view to an approaching ranking, it is evident that the result would be very different indeed from the amount presently stated.

There are, besides, the following properties and debts not valued.

I. Public Offices, Buildings, &c.

High School, cost, including 4,820 *l.* 15 *s.* 1 *d.* of subscriptions	33,970	3	9
Council chambers and offices, Royal Exchange	—		
Court-rooms at Leith, gaol, &c.	—		
The patronages of the churches	—		

II. Unadjusted Claims:

Claim against heirs of Tod for part of expense of Act for Princes-street improvements	—		
Claim against Commissioners for new buildings, Parliament-square	—		
Ditto against Sommerville & Co., and M'Caul, for part of fees incurred in measurement of works at High School	—		
Reversionary interest in the houses, warehouses, buildings and areas adjacent to docks, and the feu-duties and rents thereof, in terms of Act 7 Geo. 4, cap. 105. The feu-duties and rents collected last year amounted to 2,688 *l.* 4 *s.* $2\frac{1}{2}$ *d.*, but the debt to Government must be paid before this property can be available to the City.			

VI.—Revenues of the City not converted into Capital, 1833-34.				£.	s.	d.
1st. Assessment in lieu of impost on wine to private families						
Note.—As this tax is to be collected in future by the chamberlain, the expense of collection is not deducted.				1,764	16	4
2d. Astricted multures payable by brewers in lieu of thirlage to city mills, collected by the chamberlain				370	14	$5\frac{3}{12}$
3d. Market dues and petty customs, or common good, &c.				5,489	16	–
4th. Dues of entry of burgesses, &c.				366	14	8
5th. Dues of goods shipped at Port-Hopetown, (exclusive of proportion belonging to clergy, and of commission to collector)				389	4	6
6th. Shore dues, &c. exclusive of merk per ton, repairs and expenses of management, &c., as explained at p. 226	£.	5,208	4 $8\frac{10}{12}$			
Add, equivalent payable by the clergy annually, in lieu of their proportion of the expense of the late extension of the pier		480	– –			
	£.	5,688	4 $8\frac{10}{12}$			
Berthage and flag dues, as stated at p. 226		674	1 3			
Sum of free shore-dues, &c.				6,362	5	$11\frac{10}{12}$
7th. Rents of seats in the city churches, deducting 2,606 *l.* 18 *s.* 10 *d.* for seats unlet				7,399	–	11
8th. Ale and beer duty						

It appears to be improper to include this duty among the revenues of the city. It is true that the debts with which it is burthened are stated alongst with the other debts of the city; but it is to be kept in view, that the produce is insufficient to pay the interest of these debts and the other annual burthens with which the duty is charged. The Act expires in 1839, and there is little chance of the duty improving so much during its continuance, as to leave any surplus for the extinction of the principal sums secured, or rather placed on it. On the average of the last five years, the deficiency of the duty for its purposes, exclusive of the sum of 500 *l.* per annum to the sinking fund, has amounted to 1,360 *l.* 13 *s.* 1 *d.* per annum.

Sum of annual revenues not converted into capital				£.	22,142	12 $10\frac{1}{12}$
Of which, the sum of 5,882 *l.* 6 *s.* $1\frac{10}{12}$ *d.* arising from shore dues and berthage, and flag dues, exclusive of the 480 *l.* received from the clergy, and not, it is thought, affectable by the Government security, cannot to any extent be available, until the arrears to Government are paid up; and even then must remain liable for any deficiencies in the dock revenues to meet the interest and payments to sinking fund on the Government debt. Inde—deduct					5,882	6 $1\frac{10}{12}$
Remain of revenues				£.	16,260	6 $8\frac{3}{12}$

ABSTRACT OF THE PRECEDING VALUATIONS AND STATEMENTS.

	Capital Sums. £.	s.	d.	Annual Revenues. £.	s.	d.
I. Revenues, exclusive of Leith dues, not converted into capital	–	–	–	16,260	6	$8\frac{3}{12}$
II. Heritable and moveable property converted into capital, viz.						
1st. Heritable property yielding rent, as at p. 223	158,312	16	$3\frac{8}{12}$			
2d. Ditto - ditto yielding no rent	23,065	–	–			
Sum of heritable property	181,377	16	$3\frac{8}{12}$			
3d. Moveable property to a certain extent productive, at p. 224 £. 42,887 13 $3\frac{6}{12}$						
4th. Moveable property presently unproductive, at p. 224 47,392 9 9						
Sum of moveable property	90,280	3	$-\frac{6}{12}$			
Making together a capital sum of	271,657	19	$4\frac{6}{12}$			

Exclusive of High School, City Chambers, Leith Gaol, patronages of city churches, and unadjusted claims, as specified at p. 224

But, taking into consideration what has been before stated regarding the claims against the Leith docks, &c., and the proportion of the property unproductive included in the above Abstract, it is evident that, in valuing the funds of the city for any practical object, a considerable abatement must be made from the above amount.

The claims against the city already ascertained, exclusive of the dock debt, and the additional claims lodged, amount, as at p. 221, to	407,181	10	$2\frac{10}{12}$	

Besides such of the cautionary obligations before specified, as may be found entitled to be ranked, and if not burdens on the feu duties,

1st. Claim by Charity Workhouse, per stipulation on the extension of the royalty in 1809, for an annual payment of £. 200 – –

2d. Claim by the proprietors east end of Princes-street, and West Register-street, for exemption from local taxes, hitherto paid for them by the City, and averaging for the last five years the annual sum of 151 – –

Edinburgh, October 1834.—The foregoing Abstract Statements, with those in the annexed Appendix, have been prepared, and are humbly submitted by *Jos. Macgregor*, Accountant.

APPENDIX, CONTAINING ABSTRACT STATES OF DOCKS, SHORE-DUES, ALE DUTY, AND COLLEGE REVENUES, AND LIST OF ARREARS.

I.—Abstract States of the Free Produce of Revenues at Leith, over which the Debt to Government is preferably secured.

	£.	s.	d.
1. Leith Docks, for year to Whitsunday 1834:			
To duties collected for wet and dry docks and crane dues	7,285	18	4
To feu-duties, rents of property and seat rents	2,888	4	$2\frac{6}{12}$
Gross collection for 1833–34 £.	10,174	2	$6\frac{6}{12}$
By expense of collection, dredging the docks, &c. £. 856 12 $2\frac{6}{12}$			
Paid Commissioners of Harbour and Docks for repairs, &c. 1,423 6 5			
Deduct	2,279	18	$7\frac{6}{12}$
Remains free produce £.	7,894	3	11
Which exceeds the free produce of the preceding year by £. 853 13 3			

Note.—In the above amount collected, there is included about 174 *l.* of arrears of previous years.

II.—Shore Dues from 14th Sept. 1833 to 13th Sept. 1834:

	£.	s.	d.	£.	s.	d.
To amount of shore dues inward and outward, and at Ferry-boat stairs				10,385	6	4
Off—proportion for merk per ton payable to clergy				3,694	14	$1\frac{8}{12}$
Proportion of shore dues belonging to the city £.				6,690	12	$2\frac{4}{12}$
Deduct, 1st, Expenses of management	1,095	6	$6\frac{6}{12}$			
Less—proportion charged against the docks, pontage, pilotage and berthage £. 344 15 3						
Proportion of the difference due from merk per ton 267 – 5						
	611	15	8			
Remains £.	483	10	$10\frac{6}{12}$			
2d, Repairs, dock clerk's salary and balance of ballasting and dredging account 1,550 8 –						
Less—proportion payable from merk per ton 551 11 5						
	998	16	7			
Deduct shore dues proportion of these expenses and repairs				1,482	7	$5\frac{6}{12}$
Remains free proceeds of shore-dues						5,208 4 $8\frac{10}{12}$

III.—Berthage and Flag Dues:

Amount collected from 14th Sept. 1833 to 13th Sept. 1834			911	2 –
Deduct, expenses of management, salary to shore-master, annuity to Miss Rochead, and proportion of general expenses			237	– 9
Remains free produce				674 1 3

Note.—The shore-master's salary, &c. 140*l.*, will in future be saved, the situation having been abolished by the present council.

IV.—Pontage:

To sums received from the pontage duty from 14th Sept. 1833 to 13th Sept. 1834	1,040 – –

Note.—This duty is chargeable with the advances made by the city for the construction of draw-bridges, &c. amounting, with balance of interest, to 31,193*l.* 10*s.* $2\frac{10}{12}$ *d.*, but it has been insufficient hitherto to pay the interest on these advances.

Amount of annual free produce of the revenues at Leith, 1833–34 £.	14,816 9 $10\frac{10}{12}$

NOTES exhibiting the probable capabilities of these Revenues, with reference to the Interest and Sinking Fund, on Debt to Government.

THE debt to Government is chargeable, in the first place, as already said, against the Dock revenues, and the deficiency against the City. The dock revenues have been always insufficient to meet the payments to Government. This year, however, the free proceeds would have paid the interest at 3 per cent., within 56*l.* But it is far short of meeting the interest and sinking fund; thus,

	£.	s.	d.
Interest payable to Government, at 3 per cent., on 25,000*l.*	750	–	–
Ditto - - - ditto - - - at 4 per cent., on 240,000*l.* (the excess of which beyond 3 per cent. on the part thereof remaining unpaid, to be applied in payment and extinction of the principal, of which 23,529*l.* 14*s.* has been paid)	9,600	–	–
Sum Interest - - - £.	10,350	–	–
Deduct free proceeds of dock revenues, at Whitsunday 1834 (including about 174*l.* of arrears of former years)	7,894	3	11
Leaving deficiency to be supplied - - - £.	2,455	16	1

But at 1839 the interest on the 240,000*l.* is to be increased from 4 to 5 per cent., the excess of which, above 3 per cent., on the balance unpaid, to be applied in extinction of the principal. When this takes place, the deficiency would stand thus:

Interest at 3 per cent., on 25,000*l.*	750	–	–
Ditto - at 5 per cent., on 240,000*l.*	12,000	–	–
£.	12,750	–	–
And taking the free proceeds at Whitsunday 1834, as the average of the dock dues in future years	7,894	3	11
The deficiency in 1839, would be - - - £.	4,855	16	1

But taking the whole dues above specified also as the average of future years, it will be found that they are considerably more than sufficient to meet the interest and sinking fund, both at the present rate of interest, and at the increased rate in 1839; thus,

1. At present rate.	Amount of free proceeds of the Leith revenues, as above		14,816	9 10
	Deduct interest and payments made to sinking fund		10,350	– –
There would remain an annual surplus till 1839, of - - - £.			4,466	9 10

Note.—This does not take into calculation the arrear of one year's interest due to Government, but, with the balance in hand, that arrear might also be paid up in two years, by the above surplus, after providing for the regular termly payments as they fall due.

2. At increased rate, 1839.	Free proceeds of dock, shore dues, &c. - - -	14,816	9 10
	Deduct interest and payments to sinking fund, in 1839 -	12,750	– –
There would still remain a surplus payable to the city, of - - - £.		2,066	9 10

It will be kept in view that while, by the increase of interest in 1839, a larger sum is paid to Government, the portion of that interest which goes to the sinking fund is double its previous amount.

II.—ABSTRACT VIEW OF THE SHORE AND OTHER DUES AT LEITH, KEPT SEPARATE FROM THE PROPER REVENUE, TO AID THE DOCK REVENUES IN PAYING INTEREST AND SINKING FUND TO GOVERNMENT.

To proportion of shore dues belonging to the city, exclusive of merk per ton, received by the chamberlain from collector, from 13th November 1833 to 13th September 1834 -			4,270	– –
To berthage and flag dues, received from ditto - - - ditto - - - to - - - ditto - - -			551	6 –
To pontage - - - - - - - - - - ditto - - - ditto - - - to - - - ditto - - -			890	– –
To interest from bank on deposits - - - - - - - - - - - - -			12	1 6
	£.		5,723	7 8
By paid Mr. Sandeman, on 3d April 1834, to aid in paying interest to Government - - - - - - - - - - - - £.	2,400	– –		
By paid - - - ditto - - - 22d August 1834, to ditto - - - ditto - - -	2,200	– –		
In all, towards interest, &c. - - - £.	4,600	– –		
By balance in the Bank of Scotland - - - - - - - -	1,123	7 8		
Sum equal to receipts - - -			5,723	7 8

III.—Abstract of the Accounts of the Ale Duty, from 14th September 1833 to 13th September 1834.

	£.	s.	d.
To gross amount of the duty on ale and beer for the above period	8,454	9	6
Less—Allowed for drawbacks on quantities exported beyond the liberties	5,846	13	–
Leaving amount collected £.	2,607	16	6
To sum in hands of Royal Bank, at 14th September 1833, and 6-12ths in the hands of the chamberlain	46	15	$11\frac{6}{12}$
To ditto overdrawn from ditto, at 13th November 1833, (and still due)	41	17	7
To interest received from Bank of Scotland on new deposits with that bank, from 13th November 1833 to 13th September 1834	11	16	5
£.	2,708	6	$5\frac{6}{12}$
By paid interest, equivalents, salaries to professors, &c.; ditto for management and incidents, per Mr. Bruce's state, between 14th September and 13th November 1833 £. 555 9 8			
Ditto - - - ditto - - - ditto per state, between 13th November 1833 and 13th September 1834 1,080 13 10			
	1,636	3	6
Leaving balance in hand, at 13th September 1834 £.	1,072	2	$11\frac{6}{12}$
Of which—In the hands of the Royal Bank £. 1,072 2 7			
Balance due by Chamberlain – – $4\frac{6}{12}$			
Sum as above £. 1,072 2 $11\frac{6}{12}$			

But it might lead to misconception, if the above Abstract of mere Receipt and Expenditure were allowed to stand without some statement of the facts connected with this duty. The above free produce is about 350*l.* less than the average free produce of the five preceding years. The reason that the above balance is on hand, is, that many of the claimants on the duty have not been paid, while those who have been paid since 25th November 1833, have only received at the rate of 12*s.* 6*d.* in the pound. The duty has all along been insufficient for the burdens placed on it; and this year the deficiency of the duty to meet these burdens stands thus:

Amount of interest, equivalents, salaries to professors, and for management, placed as burdens on the duty, exclusive of 500*l.* per annum, directed to be laid aside as a sinking fund to pay off the principal	4,116	4	9
Deduct the above, free proceeds of duty	2,607	16	6
Leaving a deficiency of duty to meet the burdens for 1833–34 of £.	1,508	8	3

And this is exclusive of arrears of interest and burdens, keeping out of view the sinking fund of 14,403*l.* 7*s.* 5*d.*, of which 7,217*l.* 13*s.* 5*d.* is composed of the burden of 210*l.* per annum to the magistrates of Leith for the streets and police, which has been always paid out of the proper revenue, on account of the insufficiency of the duty.

IV.—Abstract of College Revenues and Funds.

	£.	s.	d.
1. Mortcloth dues from 14th September 1833 to 13th September 1834	127	9	6
2. Ground annuals, feu and teind duties, 1834	63	5	$10\frac{8}{12}$
3. Compositions received	28	–	–
4. Interest of 13,119*l.* 7*s.* 9*d.* on bonds placed on the ale-duty	646	–	6
Amount of revenues £.	864	15	$10\frac{8}{12}$

Besides the patronage of the parish churches of Wemyss and Currie, and of Fala alternately with Sir John Dalrymple, valued in the last printed Abstract at 2,000*l.*

But for several years past the interest from the ale-duty, forming more than two-thirds of the whole revenues, has not been paid, so that there is at this date about 2,815*l.* of arrears due to the college on that account.

And on the average of the last five years, there has been paid out of the proper revenue, beyond the revenues received, the sum of about 1,630*l.* per annum on account of the college.

V.—Arrears of Revenues outstanding at 13th September 1834.

	£.	s.	d.
1. Church seat rents, being balance in hands of the collector	127	9	$1\frac{3}{12}$
2. Impost	1,925	2	$5\frac{6}{12}$
3. Multures	33	4	$9\frac{9}{12}$
4. Feu-duties	5,550	15	$11\frac{6}{12}$
5. Compositions, about	20	—	—
6. Rents	1,201	13	—
7. Market dues and petty customs	3,762	3	5
8. Balance due on sundry assessments preceding Martinmas 1829	22	2	7
£.	12,642	11	4

9. Shore dues (kept apart for interest to Government)	£. 1,419	15	8
10. Ale duty, from 1799 to 1834	2,600	10	10

Note.—A considerable part of this may be looked on as desperate, and the greater part of the remainder will be met by drawbacks due to the brewers.

Nearly a third of the above 12,642*l.* 11*s.* 4*d.* may be looked on as doubtful, if not desperate.

The Abstract Statements in the above Appendix prepared, and before referred to, by

Edinburgh, October 1834. *Jos. Macgregor*, Accountant.

Appendix, No. 7.

Appendix, No. 7.
Report of Capt. *Thomas*, R.N., April 1834.

QUESTIONS by *Francis Beaufort*, Esq., Hydrographer of the Admiralty, answered by *George Thomas*, Esq., Royal Navy, Admiralty Surveyor, who was engaged in making an Official Survey and Admiralty Chart of the Frith of Forth, for nearly four years, regarding the projected Harbour, Dock and Low-Water Piers at Trinity.

Questions.	Answers.
1*st*, Do you consider that the soundings taken by Dall and Leslie, at the lowest ebb of spring-tides at Leith Harbour, Newhaven and Trinity (as detailed in the prospectus of the proposed new harbour, now sent), are perfectly correct, and do correspond with your measurements and soundings taken by orders of the Lords Commissioners of the Admiralty?	The soundings taken by Dall and Leslie are a few inches less than were found by me when surveying the spot.
2*d*, Do you consider that the site of the proposed harbour is better suited than any other on the Frith of Forth, as a harbour for the city of Edinburgh?	Yes.
3*d*, What is the nature of the bottom of the shore at the proposed harbour, and is that bottom adapted for building solid foundations for the proposed undertaking at the least expense?	The bottom is composed of mud, sand and clay, and consequently adapted for driving piles for the foundation of the piers.
4*th*, Do you consider the site of the low-water piers at the proposed harbour better adapted than any other on the south side of the Frith of Forth, for the purpose of forming the shortest possible communication between Edinburgh, the south, and the towns of Dundee, Aberdeen, and the whole of the north or north-east of Scotland?	I know of no better site, on the south side of the Frith of Forth, where a harbour could be established for the general interest of the city of Edinburgh and Leith.
5*th*, Are you of opinion that the proposed harbour will silt or sand up, either at its mouth or interior?	No.
6*th*, Are you of opinion that the proposed harbour would be more useful to His Majesty's ships of war, in getting their stores and provisions, than in Leith Roads, and in getting into dock, when such is necessary?	Every person who is acquainted with Leith roads will answer this question in the affirmative.
7*th*, Is there sufficient depth of water, immediately off the proposed harbour, for anchorage for His Majesty's ships of war, and what is the quality of the bottom there?	There are from five to seven fathoms of water at low spring-tides, directly off the site of the proposed harbour, at a mile and a quarter from the shore, hence, the soundings gradually decrease to the beach; the quality of the bottom is mud and clay.

Appendix, No. 7.
Report of Capt. *Thomas*, R.N., April 1834.

8th, What is your opinion generally of the proposed harbour as a great national and local improvement?

That it will be a great local improvement is beyond doubt. With regard to its national concern, I have not had time to consider this point.

9th, Do you consider that the situation of Granton or Caroline Park, or the Bay to the westward of the proposed harbour and piers, are more eligible than that of Trinity, or better suited to the trade of Edinburgh or Leith, or as a national benefit, and in what respects do these differ?

See the Answer to Question 4.

Deptford, 7 April, 1834.

(signed) *George Thomas*, R. N.
Commanding H. M. Surveying Brig, Investigator.

Appendix, No. 8.

REPORT of *Thomas Telford*, Esq., on *Frith* of *Forth* Ferries, to the Commissioners of Woods and Forests, dated 12 April 1834; with Extract from the Minute of the Board to the Treasury.

Appendix, No. 8.
Report of *Thomas Telford*, Esq.

Sir,

IN reply to yours of the 7th inst., I have perused the documents referred to, viz. the Memorial of the Ferry Trustees, the Report of Mr. Reid (Master of the Works in Scotland), and the Prospectus of a proposed floating dock at Trinity.

In 1828, I was employed by the Lords of the Treasury to survey and report upon the Lower Forth Ferries. This was accomplished with much labour and care, and plans and estimates produced.

After much investigation and inquiry, I gave it as my opinion that Newhaven on the south side of the Forth, and Burntisland on the north side, were the points most advantageously situated for steam-boat landings; and I am glad to find that this is approved of by Mr. Reid, and indeed, generally admitted.

At Newhaven, from the flatness of the shore, it was only at a distance of 400 yards beyond the present pier-head, that 10 feet depth of water at low water, ordinary springs, was found. I gave a plan for this extension, and estimated the expense, which amounted to 38,660 *l.* But by the Prospectus sent me, it appears that it is proposed to construct an extensive harbour, with a low-water landing-pier adjacent to Newhaven, at a place called Trinity. If this is carried into effect, the expense of the Newhaven extension may be saved, as the Trinity Pier will be sufficiently convenient as a landing-place to connect with Burntisland.

The distance from the Lighthouse at Newhaven and the Lighthouse on the pier at Burntisland is five 5½ miles, and is the nearest point to the former.

Instead of making use of the present entrance into Burntisland harbour, I recommend a steam-boat landing-pier, &c. to be constructed in the bay to the eastward, immediately in front of the house and garden which is, I understand, the property of Mrs. Charters. This pier will, at the distance of 700 feet from high-water line on the shore, be carried into 10 feet water at low water of ordinary spring-tides. From the westerly winds it would be protected by the rocky ridge on the eastern side of the harbour, and by the harbour itself. From the easterly gales it would be protected by the high point of Clay Ness, and the extensive sandbank which projects to the southward of it; and from the short reach across the tide-way, its own position and return head would be a sufficient security; and only one landing-slip would be necessary.

The shore is free from sand, and the bay is clear, and good holding ground, so that upon the whole, this seems a singularly favourable situation for a steam-boat station.

Immediately at the root of the pier, a space may be taken from the shore, within high water mark, and embanked for a coal-yard, store-room and whatever other conveniences are required for ferry purposes. By purchasing Mrs. Charter's property, and cutting off two small corners, of little value, good access from the town street may be obtained. Mrs. Charter's house might be made the dwelling and office for the ferry agent, as the site of the small adjoining house would afford sufficient room for an entrance to the root of the ferry pier. By this means, the intercourse would be continued through the streets, and little expense incurred.

I estimate the expense of executing this plan as here described, including the purchase of Mrs. Charter's property, cutting off the small corners, and forming a carriage way from the street to the root of the pier, all in the most substantial and workman-like manner, at 20,801 *l.* 9 *s.* 3 *d.*

If it be found that Burntisland is a proper place for a landing-pier, a new road will be necessary to connect it with Kinghorn. I have had a line surveyed for this purpose, but instead of proceeding along the steep banks to Pettycur, I have passed up a convenient hollow, directly upon the western end of the town of Kinghorn, where it joins the present road. The length of this road is about two miles and a quarter; and the expense to complete it in a perfect manner, I estimate at 2,059 *l.* 17 *s.* 8 *d.*

If these steam-boat piers were made convenient and safe for landing and embarking at all states

states of the tide, and the road from Burntisland through the county of Fife put into a proper state for a mail road, there can be little doubt that the intercourse with the populous east coast of Scotland, including the towns of Cupar, Dundee, Arbroath, Montrose, Stonehaven, Aberdeen, Peterhead, Fraserburgh, Cullen and Banff, would be by Dundee and Burntisland to Edinburgh, avoiding the present circuitous route by Perth and the Queensferry; by this means a saving in distance of upwards of 20 miles would be effected between Dundee and Edinburgh.

Appendix, No. 8. Report of *Thomas Telford*, Esq.

It is evident from the above statement, that the improvement of the landing-piers at Newhaven and Burntisland is of great importance in a national point of view.

(signed) *Thomas Telford.*

To Alexander Milne, Esq.

Conformably with Mr. Telford's Estimates, the entire works suggested by him would amount to 59,461 *l.* 9 *s.* 3 *d.* If, however, it shall appear to your Lordships to be expedient to suspend the execution of the works at Newhaven, until it shall be ascertained whether the Trinity Harbour is likely to be proceeded with, the immediate expenditure may be limited to the sum of 20,801 *l.* 9 *s.* 3 *d.*, required at Burntisland; and we are of opinion that, in the meantime, every facility should be afforded to the promoters of the projected works at Trinity; taking, however, such precautions as may be necessary for securing the public accommodation there upon reasonable terms, and for preventing those works creating any impediment or obstruction to the future extension of the pier at Newhaven, in case it shall ultimately appear that the objects and arrangements of the proprietors are inconsistent with such free access to the piers on moderate terms, as appears to be essential to general convenience at a public ferry.

We are, My Lords,
Your Lordships' very humble Servants,
(signed) *Duncannon.*
Wm. D. Adams.
B. C. Stephenson.

To the Right Honourable
The Lords Commissioners of His Majesty's Treasury.

Appendix, No. 9.

CERTIFICATE of the Licensed and King's Pilots of the *Frith* of *Forth*.

Appendix, No. 9. Certificate of Licensed and King's Pilots.

WE, the undersigned licensed Pilots for the Frith of Forth, have read a Report drawn out by Messrs. Grainger & Miller, engineers in Edinburgh, relative to the proposed Harbour of Trinity: hereby certify, that the conclusions of the Report are verified by our knowledge and experience; that we approve of the same, and believe there is no other spot on the south side of the Frith, for the advantage of Leith and Edinburgh, so well adapted for a harbour or low-water piers, which have become so essentially necessary for the accommodation of large steam-ships now employed in our coasting trade, and of vessels of large tonnage, which cannot enter into Leith harbour except at spring-tides, and not even then in most cases, without being first lightened in Leith Roads. We also certify, that the best and common anchorage, known by the name of Leith Roads, for His Majesty's ships or other vessels of any considerable tonnage, is in a line drawn from the Admiral's flag-staff at Newhaven, on with the steeple of St. Andrew's Church in Edinburgh, or Lord Melville's Monument in St. Andrew's-square. We should not consider any anchorage to the westward of these points safe for any of His Majesty's ships, or other large class of vessels.

Newhaven, 15 February 1835.

Thomas Wilson.
Philip Flucker.
George Flucker.
John Wilson.
William Wilson.
George Jarvie.
David Wilson.
William Rumsay.
Andrew Liston.
John Liston.
George Wilson.
James Hall.
Thomas Paterson.
William Liston.
George Paterson.
Walter Linton.
Peter Drybrough.
Hugh Stevenson.
Robert Wilson.
Walter Lyles.
Charles Johnston.

Appendix, No. 10.

LETTER from Captain *Reid*, R.N., to *Alexander Scott*, Esq., on Mr. *Cubitt*'s Plan of Improving *Leith* Harbour.

Dear Sir, Edinburgh, 7 Nov. 1834.

Appendix, No. 10. Captain *Reid*, R.N., to *Alex. Scott*, Esq.

Having received your letter of the 27th ult., requesting me to give you my opinion with regard to the proposed addition to the Harbour and Docks of Leith, as recommended by Mr. Cubitt—

Appendix, No. 10.

Captain *Reid*, R.N., to *Alex. Scott*, Esq.

My opinion is, that if this plan be carried into effect it will never answer the purpose intended, which I think must be apparent to all disinterested persons who are qualified to judge in such matters. But if there was a harbour far enough to the westward, capable of receiving ships of a large class, with a breakwater from east to west, they could go out and in at all times of the tide, while they would be able to work under double reefed topsails; and by there being a railway between the said harbour and Leith, there cannot be a doubt that instead of the revenue of Leith being hurt by it, it would eventually, as well as the country at large, be much benefited, owing to the extensive trade which such a harbour would draw to the Frith of Forth.

I am, &c.

C. H. Reid.

Appendix, No. 11.

LETTER from Captain *R. H. Barclay* to *Alexander Scott*, Esq., on the proposed Improvement of *Leith* Harbour.

My dear Sir, Saxe Cobourg-place, 7 Nov. 1834.

Appendix, No. 11.

Captain *R. H. Barclay* to *Alex. Scott*, Esq.

I HAVE studied, to the best of my ability, the two plans of harbours, one for the improvement of Leith, the other for a new and deep water one at Trinity. I do not pretend to be a very great judge of civil engineering, but I will venture to say that nothing can make Leith anything else than that which it is, a bar harbour; and, except any works laid out upon its improvement are carried infinitely farther out than that which will be necessary at Trinity, I conceive that every farthing will make Leith harbour worse. There is no fighting against a bar harbour, with a river coming down fraught with everything to make the bar worse, and that assisted by the tides and currents shifting the sands from time to time.

I am, &c.

R. H. Barclay.

P. S.—I think, moreover, that if Leith is to take a stand as a port of trade, a deep-water harbour so near as Trinity, connected with her docks by railroads or by a canal, is the only mode of keeping her in existence.

Appendix, No. 12.

Appendix, No. 12.

EXTRACTS from a REPORT made by the late *John Rennie*, Esq., about the year 1800. (*See* Appendix, No. 2, of Mr. *Rennies'* Report, p. 180.)

Appendix, No. 13.

EXTRACT from a REPORT of the late *John Rennie*, Esq., on *Leith* Harbour, 23 March 1818.

Appendix, No. 13.

Extract Report of *John Rennie*, Esq.

IN regard to the various plans which had been suggested for extending the piers, and thereby improving the entrance, Mr. Rennie says: "Of these four plans, there is no doubt that extending the eastern pier to the westward of the Beacon Rocks is the best, but the expense of such an extent of pier would be almost tantamount to that of extending the north wall of the wet docks to Newhaven; at any rate the difference would not be an object when put in competition with the superiority of this latter scheme; and therefore I apprehend that the execution of such a work is not more likely to be done than the completion of the docks and new entrance at Newhaven."

Appendix, No. 14.

EXTRACT from the REPORT of the late Mr. *Paterson*, Resident Engineer, of *Leith* Harbour, to the Town Council of *Edinburgh*.

Appendix, No. 14.

Extract Report of Mr. *Paterson*.

"ALL the water in the river, with what can be taken from the wet dock, will be inadequate to keeping a space of sufficient breadth clear for a passage for the shipping; I propose, therefore, to employ at least two ballast lighters, and from them I expect the most certain effect. In regard to the Newhaven entrance, it is well known the principal reason why the projector (the late Mr. Rennie) of those docks made choice of that situation, was the increased depth of water which could be obtained at their termination."

Appendix, No. 15.

EXTRACT from a printed Letter of Mr. *George Crichton*, dated 28 October 1822.

Appendix, No. 15. Extract Letter of Mr. *Geo. Crichton.*

"IN 1818, during the period that Kincaid Mackenzie, Esq. was Lord Provost of Edinburgh, that gentleman, with his usual solicitude for the welfare of the port, not only obtained the reports of Messrs. Rennie and Stevenson, before alluded to by me, but procured estimates for finishing the wet docks on the original plan, and lest the expense of this should be found an insurmountable obstacle, he also desired an estimate to be made of the sum necessary for constructing a sea wall with the view of forming a canal, so as to admit ships of large burthen from the westward at Newhaven. The estimate of the first of these was 322,565 *l.* 14 *s.* 9 *d.*, and for the latter, 191,810 *l.* 16 *s.* 11 *d.* I need hardly add, that the prospect of executing either of these plans must be distant indeed."

Appendix, No. 16.

EXTRACT from REPORT of *James Walker*, Esq., Civil Engineer, to Senior Magistrates of *Leith*, dated 25 October 1822.

Appendix, No 16. Extract Report of *James Walker*, Esq.

"MY opinion is, that the pier in the line, and according to the plan proposed by Mr. Crichton, will be completely effectual in all the very important objects proposed by it, excepting the deepening of the channel into the harbour, which I do not think it will be so powerful as Mr. Crichton supposes. His idea is, that the current of ebb being confined from running in its present direction by the stone causeway or wear, will in no way get egress but by running along the pier and wear, and will thus add to the force and quantity of the stream. This reasoning would be good, if after the construction of the wear the current of ebb could be maintained in its present direction, until it should reach the wear, but I much fear that this would not be the case, and that after the tide had ebbed as low as the top of the wear, the current would take a more northerly direction, so that there would be little or no current of tide within a straight line drawn from the end of Newhaven pier to the end of the projected pier. An inspection of the plan, I think, will render this evident. The line of destination of the pier and wear is due north; the current of ebb tide is rather to southward of east; the wear is therefore across or at right angles to the current of the tide, which will prefer any course to the one where it would have to encounter so direct an obstruction to its course, and as it is not confined on the north side it will take a more northerly direction."

Appendix, No. 17.

MINUTES of COUNCIL respecting *Leith* Harbour, dated 30 August 1710.

Appendix, No. 17. Minutes of Council of Edinburgh.

"AT Edinburgh, the thirtieth day of August, seventeen hundred and ten years, the which day the Right honourable the Lord Provost, magistrates and council of the city of Edinburgh being assembled, the Lord Provost reported, that he having had the honour to present ane petition to her Majesty, in name of the magistrates and city of Edinburgh, humbly praying that her Majesty would be graciously pleased, out of her wonted and benign goodness, to give the necessar directions for establishing at Lieth, the port of her ancient and loyall city of Edinburgh, a wett and dry dock for building, fitting and carining her Majesty's ships of war and other trading ships, which would very much conduce to the advantage of trade in generall, as the said Petition and printed Memoriall given therewith bears, ane copy of which petition and memoriall his Lordship transmitted to Baillie Brown for the councill's information; her Majesty having been graciously pleased to hear the said petition and memoriall read in her presence, ordered the same to be laid before her Privy Councill, which being accordingly done, their Lordships committed the samen to the Lords of the Cabinet Councill, who having taken the petition and memoriall to consideration, were pleased to give directions to the Earle of Sunderland, Secretary of State, to transmitt the same with the reports which were made by these gentlemen sent down to visite the Firth of Forth, and particularly the harbour of Lieth and every thing rela'ing thereto, to the Lords Commissioners of Admirality; whereupon their Lordships of the Admirality appointed the Commissioners of the Navy to attend their Board, and likewise ordered the attendance of those gentlemen visitors to be summoned to attend their Lordships, and accordingly appointed a day for that end, at which time the Commissioners of the Navy and the visitors attending, their Lordships were pleased in ane full Board to take the said matter fully under their consideration; and notwithstanding of the opposition the petitioners mett with from the Commissioners of the Navy, &c., their Lordships came to the following resolution and report: That the two piers at the port of Lieth should be carried out, and there should be ane sluice made above the bridge for cleaning the harbour

Appendix, No. 17.

Minutes of Council of Edinburgh.

and deepening the water, and so fitt it more for receiving the ships of war; and that there should ane fort be built upon the rock where the beaken stands, for the defence of the ships and harbour; which report is signed by the Earle of Orford, Sir John Lack, Sir George Bing, Mr. Dadington and Mr. Methwen, being the whole Lords Commissioners of the Admirality, and ordered their secretary to return the said report to the Earle of Sunderland; and his Lordship, by her Majesty's express order, again laid the same before the Lords of the Cabinet Councill, and their Lordships having taken the samen to consideration, approved of the said report from the Lords of the Admirality, and recommended to Mr. Secretary Boyle, one of their number, to lay the samen with their approbation before the Queen and Councill with all expedition, which in obedience to their Lordships appointment he accordingly did; and her Majesty and Councill were graciously pleased, upon the thirteen instant, to agree to the same, and ordered Mr. Secretary Boyle to transmitt the same with her Majesty's command to the Lords Commissioners of her Thesauraire, for raising of money for carrying on the said work; which report being considered be the councill, they with the extraordinary deacons unanimously declared themselves to be most sensible of the Lord Provost's great pains and endeavours to advance the interest of the good town on all occasions, of which they had many convincing proofs; and Baillie Adam Brown, in their name and by their appointment, gave to the Lord Provost their most hearty thanks for that great service, so advantageous for the trade of the good town, and earnestly entreated his Lordship to continue his best endeavours for makeing the said affair effectual and compleat, being fully perswaded that there was none so capable as his Lordship. Thereafter the councill appointed the petition and memoriall to be recorded, whereof the tenor follows:

Unto the QUEEN's Most Excellent MAJESTY,

The PETITION of the Lord Provost, Baillies, Town Councill, Community and Inhabitants of Your Majesty's ancient and loyal City of *Edinburgh*,

Humbly sheweth,

THAT your petitioners did presume with all dutiful respect in Aprile last to supplicat your most excellent Majesty that some encouragement be given for trade and navigation, by makeing wett and dry docks at Lieth (the port of Edinburgh) in the Frith of Forth, setting furth reasons both concerning the advantage of trade in generall, accommodation of your Majesty's ships, and the present danger that your Majesty's said ancient city of Edinburgh is in by decay and ruin by the great alterations that have been made for the publick good in the settlement of the happy union of your kingdoms, which decay of your Majesty's said ancient city nothing can more effectually discourage not only your Majesty's most loyall and faithfull subjects of Edinburgh, but the whole body of your people in Scotland, who from the declining state of that place, the seat of the judicatories, and where there is the greatest resort of people of all sorts in that part of the island, will be ready to draw conclusions prejudiciall to the present state of that part of your Majesty's kingdom as it is united; and on the other hand, nothing can really more convince your people in those parts of the advantages of that happy conjunction, than the marks of your royal care and bounty shewn at the centure and heart of that part of the island, and from whence life and a good disposition will easily diffuse itself through all the parts of it, which otherways being att so great a distance from the ordinary place of your royall residence and meetings of the parliament, must otherways languish.

That your Majesty having communicated to your privy councill the aforesaid petition, you were afterwards most graciously pleased to recommend to the then Lord High Admirall that a survey might be made and reported, in order to the makeing the foresaid docks, and his Lordship pursuant thereto did give directions to the Navy Board, that certain persons from the Trinity-House and some officers out of the docks should be sent into Scotland, to take a survey of the shoars and bays in both the sides of the Firth of Forth, in North Britain, as well with regard to the conveniences which are already in the said Firth, or which may be made for carineing, cleaning and refitting her Majesty's ships that may be employed on the said coast of North Britain. But in this order there being no particular notice taken of the port of Lieth, we did again presume to address your Majesty that directions in particular might be given as to that, whereupon your Majesty was again pleased to recommend to the said Lord High Admirall to survey where and in what manner a wett and dry docks might be made and sunk at Lieth, and his Lordship was pleased to give directions accordingly.

That pursuant to these directions, surveys have been made in the river of Forth, and of the harbour of Lieth in particular, and the report was made by the persons employed in that service, which was presented to your Majesty by my Lord High Admirall, but there has been nothing further done upon it. That the necessity of doing something speedily for the service of your Majesty's ships, and to revive and quicken trade upon that side, and particularly at Edinburgh, every day does encrease, and we are hopefull that the improvement of the said harbour of Lieth will be found a matter of no great difficulty when the report of the foresaid persons is considered, and which report is confirmed by another report from the Trinity-House at Lieth, and that it will appear to your Majesty that there is no proportion between the expence necessar for perfyting so good a work, and the great advantadge that will thereby accrue to your Majesty's service, to trade in generall, and particular happiness and contentment of the people of Scotland; and that tho' the charges of making docks at Lieth were greater perhaps than would be necessar for compleating

pleating them in some other place in the river of Forth, yet the advantadge of having a dock so near the center, where your Majesty's officers, civil and military, and the greatest confluence of your people are at hand, with the sensible satisfaction it might give to the body of your people in Scotland, will abundantly counterbalance the difference. Appendix, No. 17. Minutes of Council of Edinburgh.

May it therefore please your Most Excellent Majesty graciously to consider the foresaid report made of the harbour of Lieth, and likewise the report from the Trinity-House at Lieth, whereby we hope it will appear that upon no great charge your Majesty may have there twenty foot water within your said harbour, and conveniences of wett and dry docks, which will be of great use for the public service and for the happiness of your people, and give such directions in the matter as to your Majesty in your great wisdom shall seem meet.

MEMORIALL humbly moving for a Wett and Dry Dock of *Lieth*, the Port of *Edinburgh*, in North Britain, and setting forth the advantage thereof, and what has been done thereupon.

Our most gracious Sovereign and her most honourable privy councill having taken into their consideration that hitherto there has been no provision made for the security, the cleaning, carineing and refitting her Majesty's ships of war in that long tract of shoar of North Britain, did in Aprile last, as well upon that accompt as for the encouragement of trade and a mark of her Majesty's bounty to her most ancient city of Edinburgh, think it most needful and convenient that a dock should be established in the Firth of Forth, the common resort of her Majesty's ships of war.

In pursuance to this resolution, the Earle of Pembroke, then Lord High Admirall, gave directions to the Commissioners of the Navy to send to North Britain some of the members of the Trinity-House and some officers out of the docks, with instructions to survey the Firth of Forth on both sides, and particularly to survey the harbour of Lieth, and how far it might be improved for the establishingof a wett and dry dock there, and to take their report to him.

Accordingly three of the Trinity-House and two officers out of the docks were sent, who surveyed all the harbours on both sides, but made a particular report of the harbour of Lieth, and what was necessar to improve it pursuant to a special direction from her Majesty to that effect, and made ane estimate of the charge, which estimate amounts to thirty thousand pound, and that for building out the two piers, sinking a wett dock, making a dry dock, building a sluice above the bridge, and all other conveniences of a dock; which report was made to the Lord High Admirall, who sent it to the Commissioners of the Navy for their opinion and approbation, who seemed very well disposed to give their opinion in favours of Lieth, but did afterwards (probably to save the Government money) alter their opinion, and gave it in favours of the Queensferry, the estimate of which amounts to nineteen thousand eight hundred pounds, and that for building a dry dock only; so that Lieth (in the opinion of those that were sent down) is the most convenient place, which is likewise confirmed by a report and declaration subscribed by the whole members of the Trinity-House at Lieth, wherein they declare that the building out of the pier and making a sluice above the bridge will occasion twenty foot water upon the bar, and that there are docks there already, wherein ships of thirty and fourty tuns have been built and repaired even in the bad state they are now in, and likewise keys and storehouses of all manner of mechanicks, which docks with a very small expence may be made useful for her Majesty's shipping, and that they had bored the ground twenty foot deep, and found nothing but hard clay, which is most convenient for sinking of a wett dock.

It is necessar for preventing of mistakes, to observe that the report made by those who were especially employed by the Lord High Admiral, takes notice that the water when they were there did only rise above the bar of Lieth fourteen foot, whereas that report from the Trinity-House at Lieth, subscribed by the whole members, bears that the water rises fifteen, sixteen and seventeen foot, both which are true; and the reason of the seeming difference is, because when the gentlemen who were sent from the Admirality visited that harbour in May last, where there had been, as it happens sometimes, a long tract of easterly winds, which had cast in a great deal of sand upon the bar, and which the carrying out of the pier, according to both opinions, will certainly occasion and raise the water to twenty foot, which its presumed will be sufficient for the service of her Majesty's largest ships, and what use that may be to the Government is apparent.

And likewise Lieth being the port of Edinburgh, there will be greater plenty of provisions, materials and artificers for service, and upon occasion greater numbers of people to assist in every exigence; and Edinburgh being the seat of the judicatories, will most probably be the best affected to the Government, and where the Government will always have the greatest number of troops and officers of all kinds, and more immediate inspection.

And in case there were any occasion of employing ships to the north, a dock at Lieth would be most convenient, especially a wett dock, in which half-a-dozen of ships of war might always ly afloat, ready upon occasion either in peace or war.

Its hoped the Queen and Government will readily incline to have it at Lieth, not only because it is the most convenient place, but likewise because the city of Edinburgh has lost (by the Union) the benefit of the frequent meeting of Parliaments, ye Privy Councill and the residence of severall considerable persons that were in eminent posts in the Government, and by these means the city of Edinburgh begins to decay very fast and sensibly, which is ane universall discouragement to all people in that part of the country whereof the city of Edinburgh is the center and heart, and therefore it seems expedient that something should be done for the encouragement of that place, which will be most naturally and easily by

Appendix, No. 17.

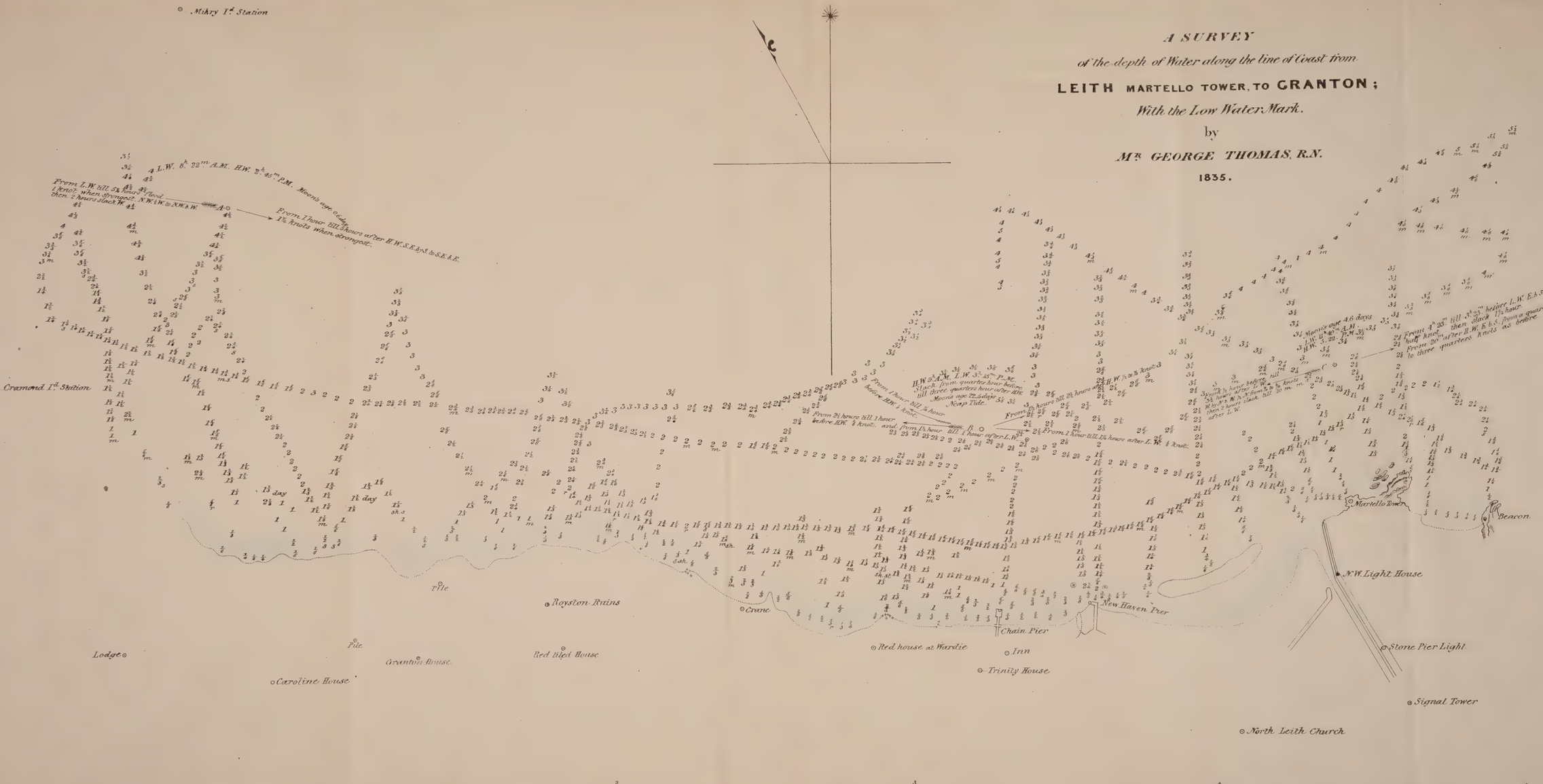
Minutes of Council of Edinburgh.

setting a dock at Lieth, especialling seeing the reviving of that place will gratifie the greatest body of the people of Scotland, will remove the jealousies and discontents of disaffected people to the Union, and by the improvement of the harbour will contribute very much to her Majesty's service and trade in generall, and to make it any where else will not at all answer the aforesaid ends, but it will be a great disappointment and discouragement to the greatest body of her Majesty's subjects in those parts.

And therefore it is hoped that the foresaid reasons will much more than counterbalance the odds between twenty and thirty thousand pounds, especiallie considering that there is both a wett and dry dock included in the estimate of Lieth, and nothing but a dry dock at the Queensferry.

Extracted from the Council Records, upon this and the sixteen preceding pages, by

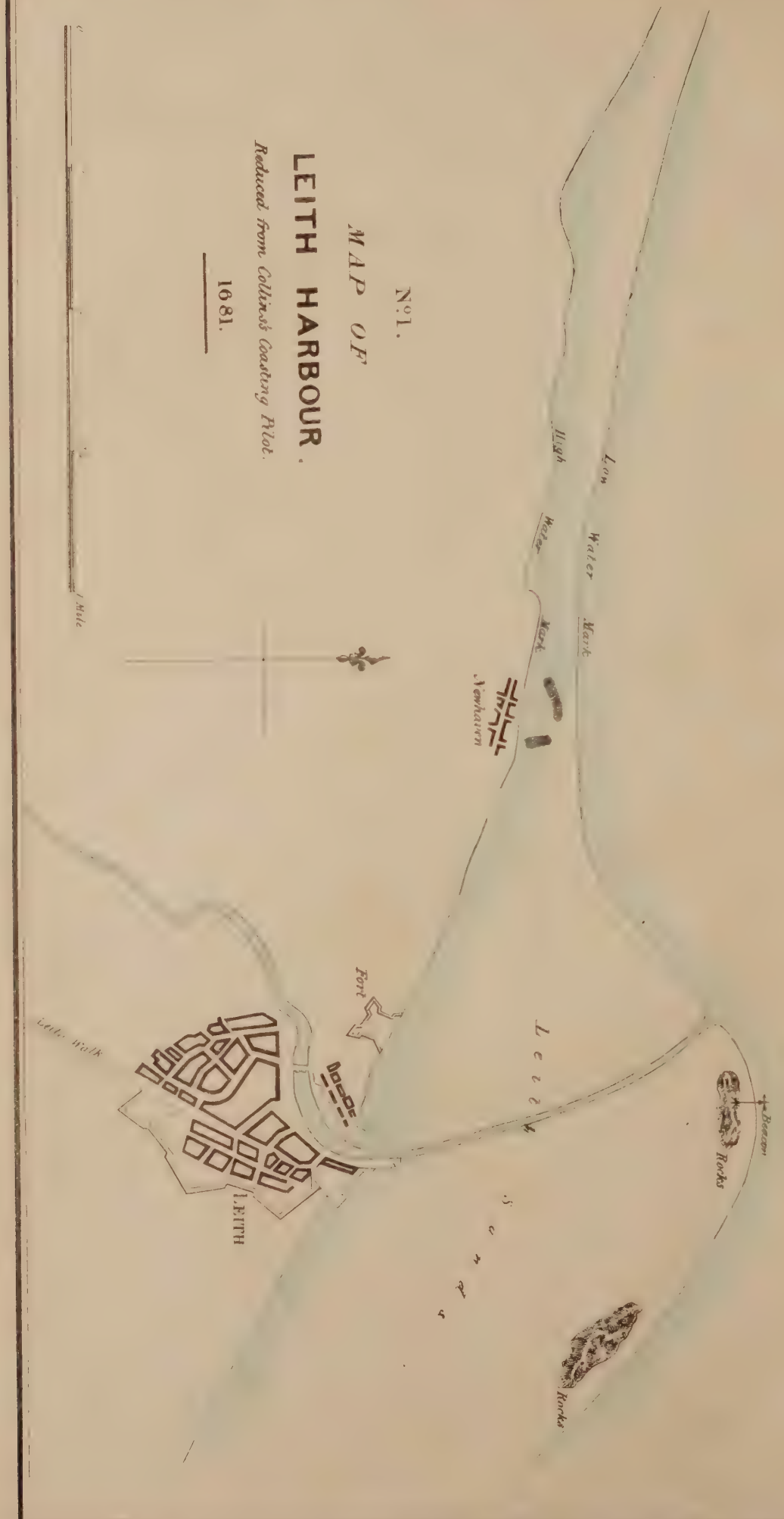
Carlyle Bell, Conj^{t} Cl^{k}.



Day & Haghe, Lithrs to the King, 17, Gate Street.

370. Ordered by the House of Commons to be Printed, 6th July 1835.

James & Luke G. Hansard & Sons, Printers.


Nº1.
MAP OF
LEITH HARBOUR.
Reduced from Collins's Coasting Pilot.
1681.
1 Mile
High Water Mark
Low Water Mark
Newhaven
Fort
Leith Walk
LEITH
Roads
Rocks

No. 2.

PLAN OF
LEITH HARBOUR & DOCKS.

Reduced from Dall & Leslie's Survey.

1831.

Ordered by the House of Commons to be Printed, 6th July 1835.

570.

Day & Haghe lith 370. Ordered by the House of Commons to be Printed, 6th July, 1835. Jas. & Luke G. Hansard & Sons, Printers

No. 4.

PLAN OF
LEITH HARBOUR & DOCKS,
Shewing the Proposed
HARBOUR & DOCKS
at
GRANTON.

370. Ordered by the House of Commons to be Printed, 6th July, 1835.

Day & Haghe Lith.rs to the King

Ja.s & Luke G Hansard & Sons, Printers.

5.

PLAN OF

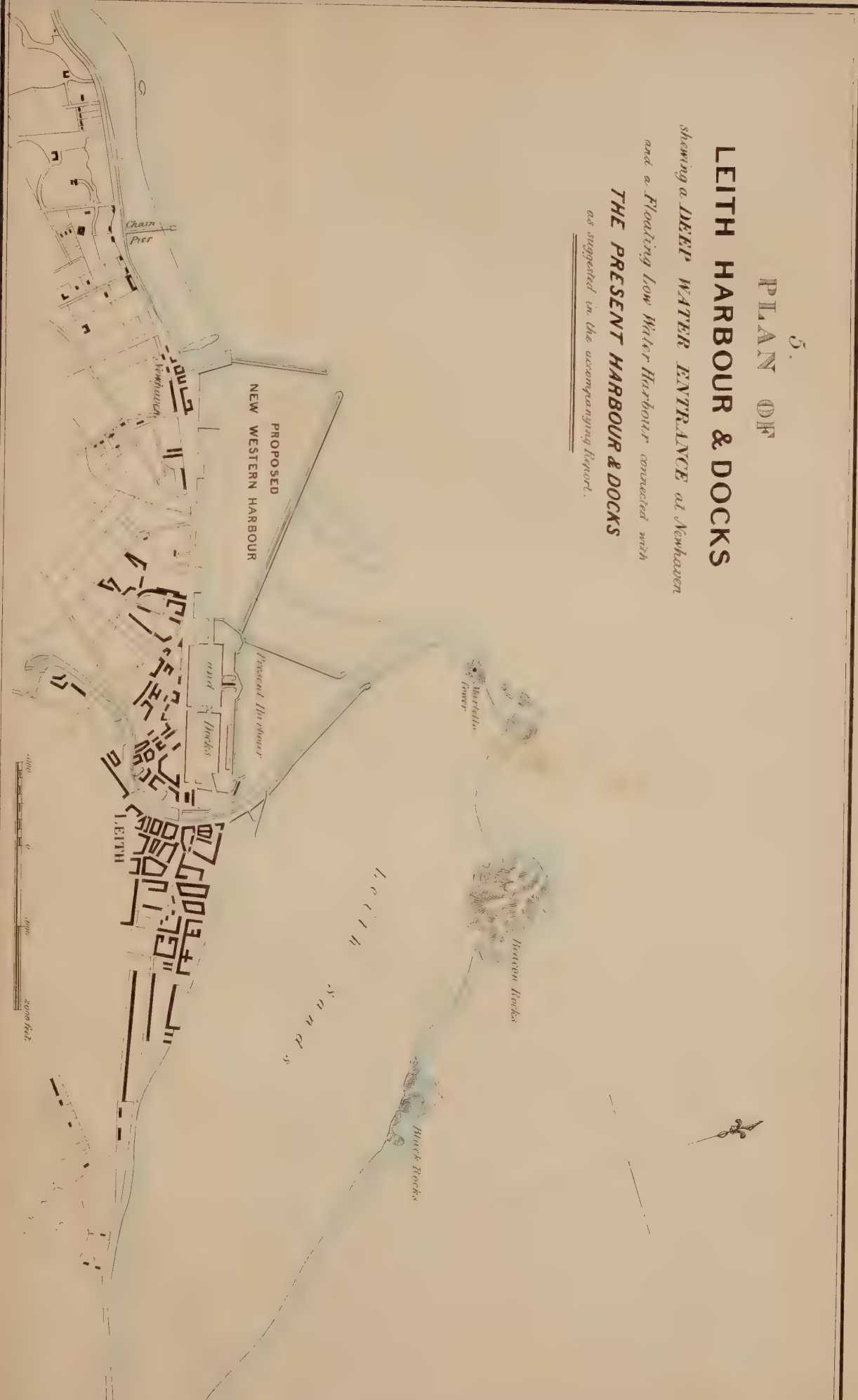
LEITH HARBOUR & DOCKS

shewing a DEEP WATER ENTRANCE *at Newhaven*

and a Floating low Water Harbour connected with

THE PRESENT HARBOUR & DOCKS

as suggested in the accompanying Report.



Day & Haghe, lith.rs to the King. 570. Ordered by the House of Commons to be Printed, 6th July, 1835 Jas & Luke G Hansard & Sons Printers

No. 6.

ENLARGED PLAN

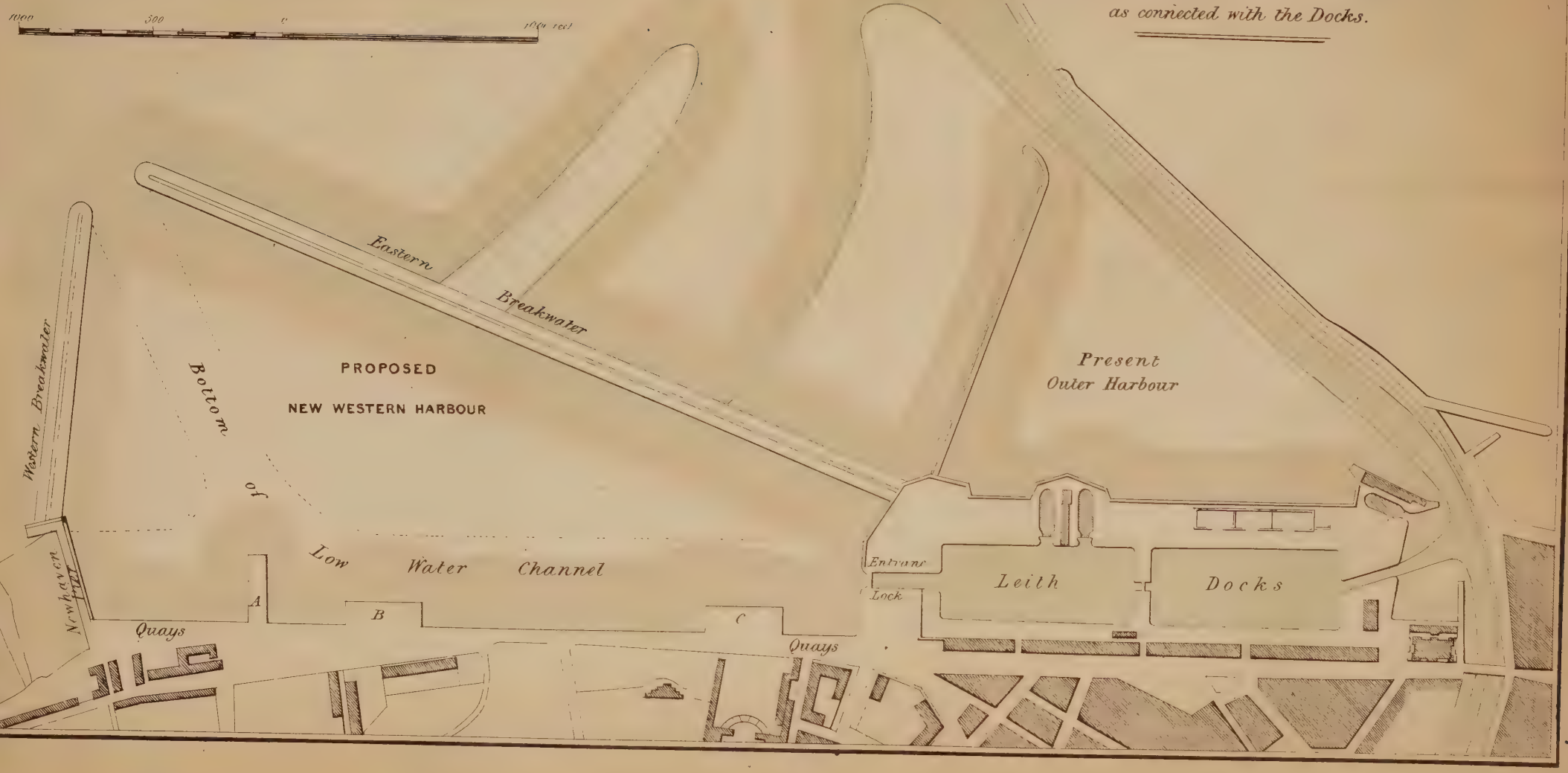
OF THE

NEW WESTERN HARBOUR

as connected with the Docks.

REFERENCE.

ABC. Wharfs referred to in the Report.



Ordered by the House of Commons to be Printed 6th July 1835.

Sir A. Lubbock, Hansard & Sons, Printers

370.

EDINBURGH.

PLAN OF LEITH HARBOUR,

with the

VARIOUS PLANS PROPOSED

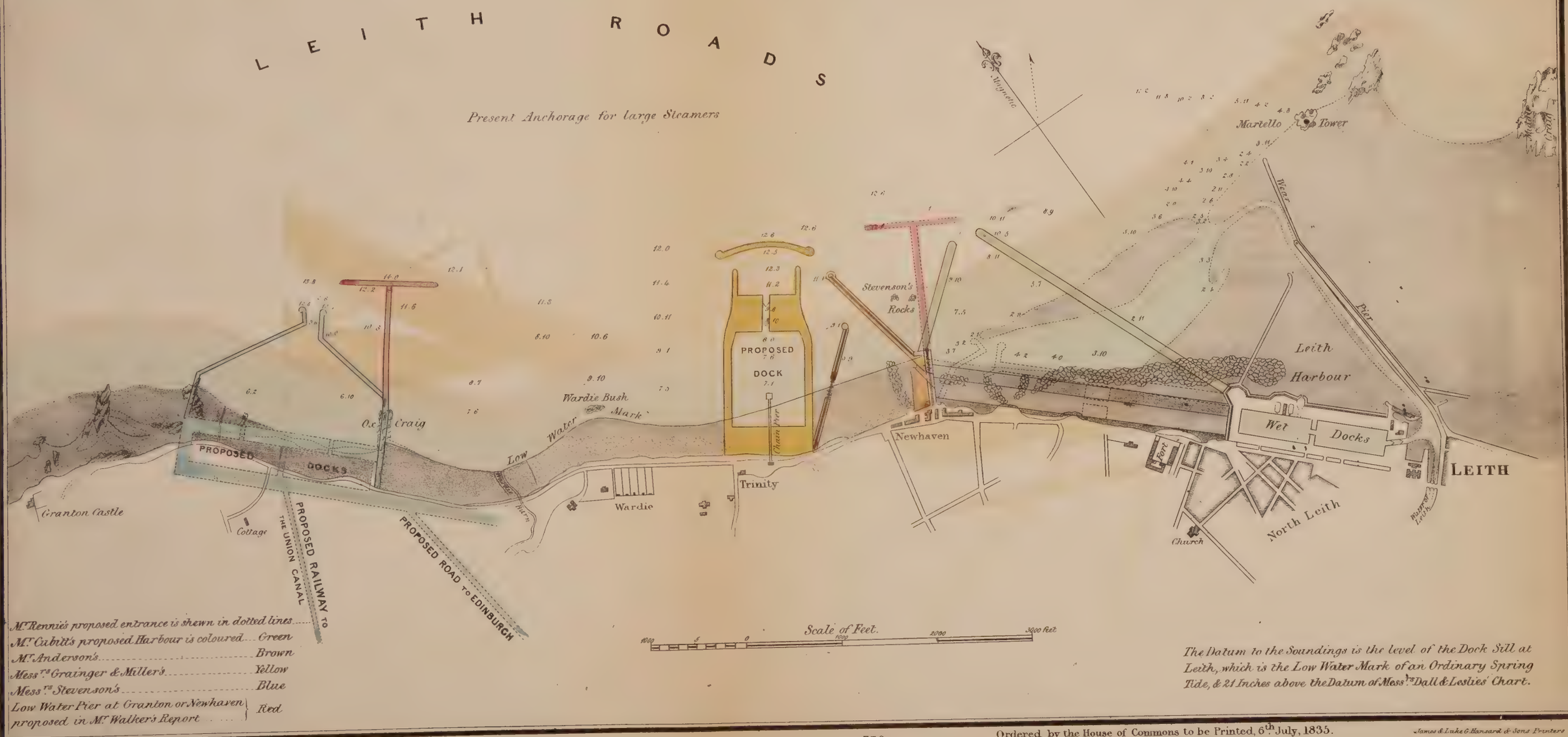
for

NEW WORKS,

referred to

in M.r Walker's Report.

1835.



The Datum to the Soundings is the level of the Dock Sill at Leith, which is the Low Water Mark of an Ordinary Spring Tide, & 21 Inches above the Datum of Mess.rs Dall & Leslies' Chart.

Day & Haghe. Lith.rs to the King 17 Gate St. L. I. F.s

370.

Ordered by the House of Commons to be Printed, 6th July, 1835.

James & Luke G. Hansard & Sons Printers

PLAN OF LEITH HARBOUR.

Shewing the improvements proposed to be made therein, by extending the present Old Entrance to the Martello Tower, also, extending it by a Ship Canal and Entrance Harbour, to

NEWHAVEN.

370. Ordered by the House of Commons to be Printed 6th July, 1833.

Reduced Plan of
LEITH HARBOUR & DOCKS
exhibiting a Deep Water Entrance at NEWHAVEN with a Wet Dock or Ship Canal communicating with the Western Wet Dock.

By James Anderson, Civil Engineer.

April 1834.

Martello Tower

Line of 12 feet soundings

Line of 10 feet soundings

Rocky & Foul Ground

Mr Cubitt's Breakwater as proposed

Sand Banks

Mr RENNIE'S ENTRANCE as proposed

NEWHAVEN PIER

Line of Low Water Spring Tides

PROPOSED HARBOUR FOR STEAM VESSELS

PROPOSED WET DOCK OR CANAL

Mr Rennie's Pier as proposed

OUTER HARBOUR

Wardie Burn

Wardie Lodge

Trinity House

Lavrock Bank

Basin

Lock

Gate

LEITH WET DOCKS

Dock

Water Houses

Street

Harbour

Custom House

Leith Fort

Bridfield

Albany Street

Governor's Property

PROPOSED NEW ENTRANCE TO FIRTH OF FORTH

TRANSVERSE SECTIONS OF PIER at AB

High Water spring Tides

Low Water spring Tides

TRANSVERSE SECTIONS of BREAK WATER at CDEF

Head at C

Base at F

Base at E

Base at D

TRANSVERSE SECTION OF CANAL or WET-DOCK.

High Water Stream Tides

Low Water Stream Tides

Scale for Sections.

10 5 0 10 20 30 40 50 60 70 80 90 100 200 feet

Scale for Plan.

100 50 0 100 200 300 400 500 600 700 800 900 1000 2000 3000 feet

370. Ordered by the House of Commons to be Printed 6th July 1835

James & Luke Hansard & Sons, Printers

Day & Haghe Lith.

Day & Haghe lith.

570.

Ordered by the House of Commons to be Printed, 6th. July, 1835.

Jn.o & H. Lucke & Harrad & sons Printers

PLAN

OF THE INTENDED

HARBOUR, DOCKS, PIERS,

and other Works connected therewith,

AT

TRINITY,

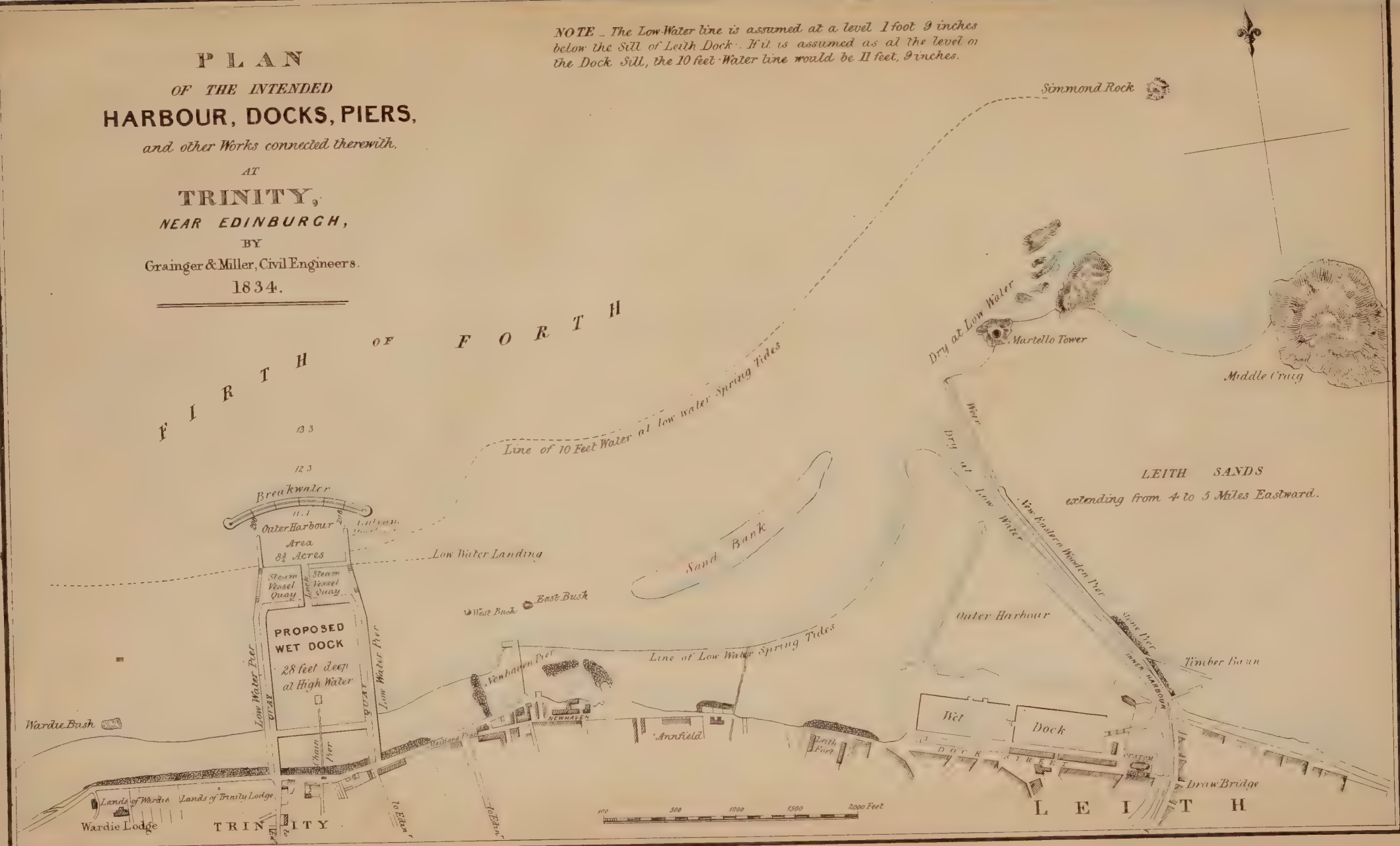
NEAR EDINBURGH,

BY

Grainger & Miller, Civil Engineers.

1834.

NOTE – The Low-Water line is assumed at a level 1 foot 9 inches below the Sill of Leith Dock. If it is assumed as at the level of the Dock Sill, the 10 feet Water line would be 11 feet, 9 inches.



Ordered by the House of Commons to be Printed, 6th July 1835.

of the East Coast of the

FIRTH OF FORTH,

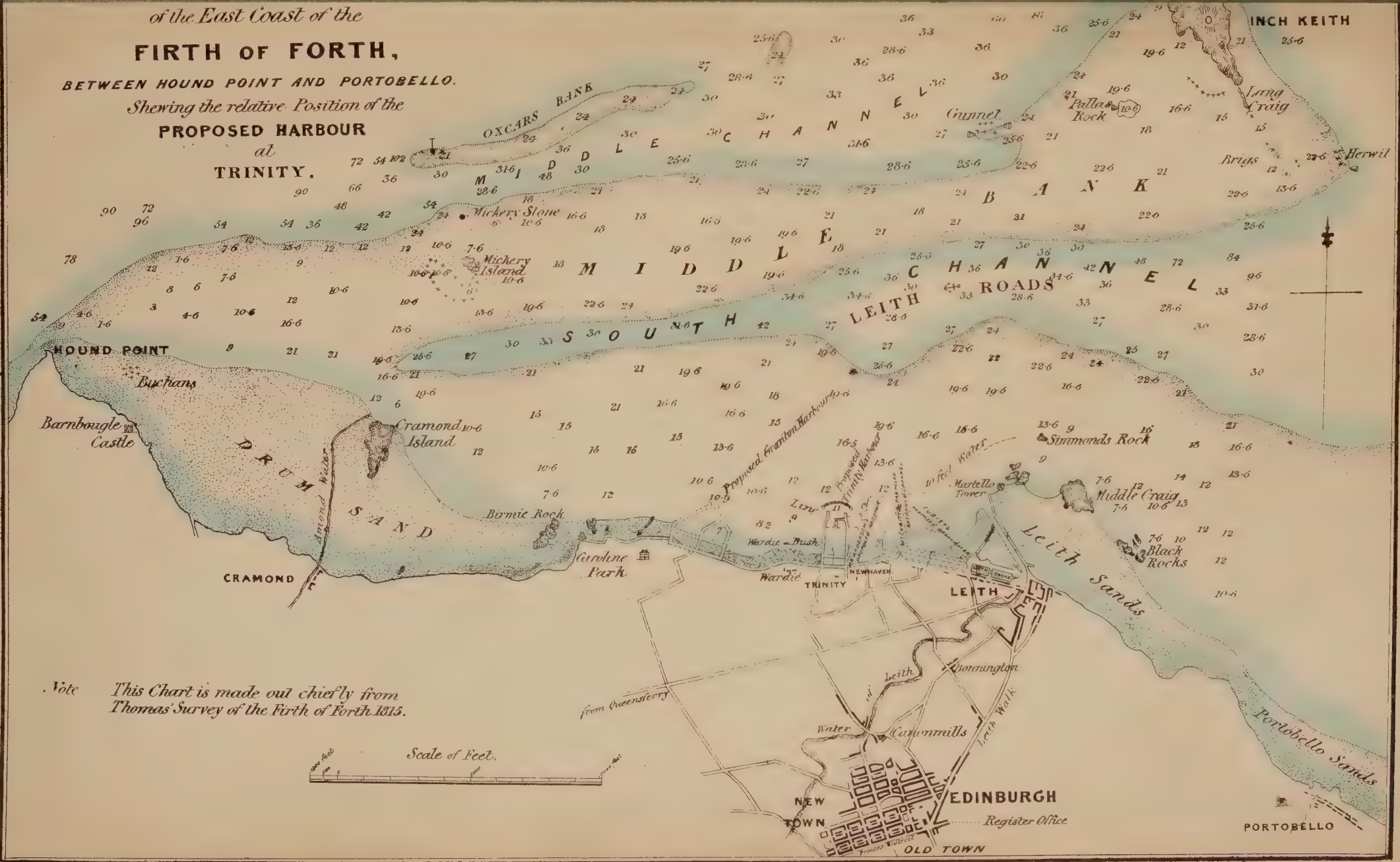
BETWEEN HOUND POINT AND PORTOBELLO.

Shewing the relative Position of the

PROPOSED HARBOUR

at

TRINITY.



Note — *This Chart is made out chiefly from Thomas' Survey of the Firth of Forth 1815.*

Scale of Feet.

Tho.s & Lance G. Hansard, Printers

REPORT

FROM

SELECT COMMITTEE

ON

REGENT-STREET PAVING;

WITH THE

MINUTES OF EVIDENCE

AND

APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
14 *August* 1835.

Veneris, 3° *die Julii*, 1835.

Ordered,

THAT a Select Committee be appointed to take into consideration the Petition of Householders of Regent-street, within the Parishes of St. James, Westminster, and St. George, Hanover-square, that they may be placed with regard to paving, lighting, &c. on an equality with occupiers of houses situated in the Parishes of St. Mary-le-bone and St. Martin.

And a Committee was appointed of—

Sir Francis Burdett.	Mr. Harvey.
Colonel Evans.	Mr. Humphery.
Sir John Hobhouse.	Dr. Lushington.
Mr. Byng.	Mr. Clay.
Mr. Hume.	Sir Samuel Whalley.
Mr. Grote.	Mr. Henry Lytton Bulwer.
Mr. Alderman Wood.	Mr. Lennard.
Mr. Pattison.	Mr. Ponsonby.
Mr. Crawford.	Mr. Tulk.
Mr. Thomas Duncombe.	Mr. Hall Dare.
Mr. Wakley.	Mr. O'Connell.

Ordered, THAT Five be the Quorum of the Committee.

Lunæ, 6° *die Julii*, 1835.

Ordered, THAT Lord Granville Somerset, Lord Viscount Lowther, Mr. William Ponsonby, and Mr. Vernon Smith, be added to the Committee.

Lunæ, 13° *die Julii*, 1835.

Ordered, THAT the Committee have power to send for Persons, Papers and Records, and to report their Observations to the House.

Mercurii, 12° *die Augusti*, 1835.

Ordered, THAT the Committee have power to report the Minutes of the Evidence taken before them.

REPORT - - - - - - - - - - - - p. 3
MINUTES OF EVIDENCE - - - - - - - - 4
APPENDIX - - - - - - - - - - - 56

REPORT.

THE COMMITTEE to whom the PETITION of several HOUSEHOLDERS of *Regent-street*, within the Parishes of *Saint James*, *Westminster*, and *Saint George*, *Hanover-square*, that they may be placed with regard to paving, lighting, &c. on an equality with Occupiers of Houses situated in the Parishes of *Saint Mary-le-bone* and *Saint Martin*; and also the PETITION of the Members of the UNITED SERVICE CLUB, *Pall Mall*, were severally referred, and who were empowered to report their Observations thereupon, together with the MINUTES OF THE EVIDENCE taken before them;——HAVE agreed to the following REPORT:—

YOUR Committee have examined several Witnesses as to the truth of the matters complained of by the Petitioners, and have agreed to report the Evidence to The House, together with the Documents therein referred to; and Your Committee are of opinion that the allegations contained in the said Petitions are well founded, and that the Petitioners have made out a case of hardship; although the mode of granting relief Your Committee feel themselves unable to point out, as it would require more Evidence to be gone into, which, at the present advanced period of the Session, they conceive it would be impossible to enter upon; and they therefore recommend that a Committee be appointed early in the next Session of Parliament to prosecute the inquiry, with a view to the suggestion, if possible, of a remedy for the grievances complained of.

LIST OF WITNESSES.

Veneris, 17° die Julii, 1835.

Mr. *William A'Beckett* - - - - - - - p. 6
Benjamin Warden - - - - - - - - - 9
Mr. *Philip H. Le Breton* - - - - - - 10
Mr. *Jehoshaphat York* - - - - - - - 12
Mr. *Martin Farrell* - - - - - - - 13
Mr. *Joseph Toogood* - - - - - - - 14
Mr. *Henry Rice* - - - - - - - - 18
John Griffiths - - - - - - - - 21
James Roberts - - - - - - - - 21
George Churchman - - - - - - - 21
Robert Wilson - - - - - - - - 21
Joseph Crookes - - - - - - - - 21
James Graham - - - - - - - - 22
John Pugh - - - - - - - - - 22

Mercurii, 22° die Julii, 1835.

Stephen Lewis - - - - - - - - 22
George Buzzard - - - - - - - - 23
Robert Lees - - - - - - - - - 23
Mr. *Henry Rice* - - - - - - - - 24
James Roberts - - - - - - - - 30
Mr. *Charles Mayhew* - - - - - - - 31
Alexander Milne, Esq. - - - - - - - 35

Lunæ, 27° die Julii, 1835.

Alexander Milne, Esq. - - - - - - - 40
Mr. *Robert Scace* - - - - - - - - 48
Mr. *Martin Farrell* - - - - - - - 49
Mr. *Joseph Toogood* - - - - - - - 51
William Adams - - - - - - - - 54

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MINUTES OF EVIDENCE.

Veneris, 17° *die Julii*, 1835.

SIR FRANCIS BURDETT, BARONET, IN THE CHAIR.

[A Petition from the Householders of Regent-street, and St. George's, Hanover-square, was read.]

[*The following Documents were then handed in and read.*]

To the Right honourable the Commissioners of His Majesty's Woods and Forests and Land Revenues.

The Memorial of the undersigned Householders of *Regent-street*, within the parish of *St. James, Westminster*.

Sheweth,

THAT in the month of May last a Memorial of the Occupiers of Houses in Regent-street and Waterloo-place, in the City of Westminster, agreed upon at a general meeting holden on Wednesday, the 30th day of April 1834, was presented to the then Commissioners of His Majesty's Woods and Forests and Land Revenues, stating, That it appeared that under the authority of the several Acts of Parliament for paving, lighting, watering and watching the above street and other places under the jurisdiction of the Commissioners thereby appointed, the occupiers of houses in that part of Regent-street situate between Pall Mall and Oxford-street, had for many years past been excessively taxed to raise funds towards paying the interest and paying off the principal of upwards of 200,000*l.* raised under the authorities of the said Acts for improving the property of the Crown situate in the Regent's Park, Whitehall, Privy Gardens, Carlton Gardens, and in other parts of St. Mary-le-bone and City of Westminster, whereby His Majesty's Commissioners of Woods and Forests and Land Revenues had been enabled to let such improved property at ground-rents producing a very large annual addition to the revenues of the Crown: And by the said Memorial the Memorialists appealed to the justice of the Commissioners to recommend His Majesty's Ministers to bring a Bill into Parliament to reduce the rates authorized by the said Acts to be levied on the Memorialists, so that the same might not exceed the rates made by the parochial committee for paving other parts of the parish of St. James; or to grant relief in such other manner as might be deemed meet.

That, shortly afterwards, several of the Memorialists were heard on the matters of the said Memorial, and were induced to hope that relief would be granted.

Your Memorialists respectfully call the attention of the Commissioners of His Majesty's Woods and Forests to the fact, that the occupiers of houses in that part of Regent-street situate in the parish of St. Mary-le-bone are exempt from a higher rate than 9*d.* in the pound; and that the occupiers of houses in St. Martin's-in-the-Fields are subject to no higher rate than made by the Paving Committee of that parish, and that the occupiers of houses under the control of the Paving Committee of St. James are now paying only 3*d.* in the pound per annum; whereas the occupiers of houses between Pall Mall and Oxford-street, in the said parish, are now, and have been for several years past, rated at 2*s.* in the pound for paving, lighting and cleansing only.

Your Memorialists humbly submit, that it is unjust for the occupiers of the frontage of a thoroughfare for all His Majesty's subjects to be exclusively taxed for keeping the same in repair; and that it is unprecedented for householders to be substituted for a turnpike toll when a road has been made for

the purpose of a thoroughfare to various parts of the metropolis for the convenience of the public at large.

Your Memorialists not doubting but that Parliament will consent that the deficiency, if any, of the funds required for keeping such thoroughfare in repair may be supplied from the Land Revenues, humbly hope to be relieved by being placed on an equality with their neighbours in St. Mary-le-bone and St. Martin.

Your Memorialists therefore pray, that the former and this Memorial may receive early consideration, and that they may be relieved in manner above suggested, or otherwise, as may seem meet.

Gentlemen, Office of Woods, &c. 14th March 1835.

We have taken into consideration the allegations of your Memorial, presented to this Board on the 7th ultimo, with every disposition to afford relief and to satisfy the wishes of the Memorialists.

We cannot, however, accede to the proposition of submitting to Parliament a grant out of the revenues of this department, in aid of the expenses of the repairing, lighting and cleansing Regent-street; 30,000*l.* of the public money have been expended in the formation of that street, the repayment of which, though never demanded, has never yet been relinquished; and there are no public grounds, in our opinion, for an appropriation of the public money for the objects suggested by the Memorialists.

Neither should we feel justified in taking on ourselves to recommend to Parliament the repeal of those enactments of the several statutes of Geo. 3, &c. by which the existing mode of assessing, levying and managing the rates requisite for the repairing, lighting and cleansing Regent-street is authorized and established; and throwing, by such alteration, the burthen now borne by the inhabitants of Regent-street, and of which (when they took their houses in that street) they must in their principle, if not in their extent, have been fully cognizant, on the remainder of their respective parishes. On the other hand, as there seem some grounds of general principle for the whole of the respective parishes contributing to the cost of so important and much used a thoroughfare as Regent-street is, we should throw no impediment in the way of a proposition being submitted to Parliament, provided in any law for that purpose due care was taken that the several parties who have lent their monies, on the faith of the existing statutes, to the Commissioners of Regent-street, should be fully secured from loss, and have ample security for the regular payment of the interest on their loans, as well as the eventual repayment of their principal.

The Memorialists may rely with confidence on our anxiety to diminish in every way the expenses incidental to the repairing, cleansing and lighting Regent-street; but as we find that the keeping in good order, by the parochial authorities of Mary-le-bone, the granite road of Oxford-street, on the average of the last four years, varies but little from the expense hitherto incurred for the same object in Regent-street, we cannot with any confidence hold out to the Memorialists any important diminution of their present rates, if on them is still to be left the entire support of this much-frequented thoroughfare.

In conclusion, we wish to express our regret that our desire to give this subject the most deliberate attention and consideration has caused us to suffer so much time to elapse before we have replied to the application made to us in February last by the Memorialists.

We are, Gentlemen,
Your very humble servants,

Messrs. Brown, Urling, and others.

(signed) *Granville C. H. Somerset.*
B. C. Stephenson.
A. Milne.

Mr. *William A'Beckett*, called in; and Examined.

Mr. *W. A'Beckett.*

17 July 1835.

1. WHERE do you live?—I live in Golden-square.

2. Can you state under what authority, and by what Acts of Parliament, the lighting, paving, cleansing and watching of Regent-street are regulated?—The first Act is the 1st May 1813, for paving and improving Mary-le-bone Park, under which the Lords of the Treasury and the Commissioners of Woods and Forests were appointed trustees, three of whom were to be a quorum for borrowing money, and

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and two to be a quorum in other cases; by that Act the proceedings were open to inspection by the persons rated.

Mr. W. A'Beckett.

17 July 1835.

3. What chapter is that?—Chapter 62; that Act empowered the trustees to pave, repair, light, water and watch; the rate for paving, cleansing, lighting and watching not to exceed 2*s.* in the pound, watering 6*d.*, and enclosures and planting 2*s.*, and it authorized the raising of 40,000*l.* The next Act is the Act of the 10th July 1813, the same year; that was an Act for making a more effectual communication from Mary-le-bone Park and the northern parts of the metropolis to Charing Cross. The Commissioners were the Commissioners of Woods and Forests; two to be a quorum; and that Act to authorize the raising of 500,000*l.*, to purchase houses and property described on the plan; to make streets, grant leases, &c.; to erect lamp-posts, watch-boxes; to repave the pavements which were to remain the property of the parish; it also authorized the raising of 100,000*l.* to make sewers. The next Act is that of 8th July 1816, the 56th Geo. 3, c. 128, which was to amend the before-mentioned Acts; the trustees are the same as by the first Act; the quorum the same; and by that Act 60,000*l.* was authorized to be raised to pave, light, watch, regulate and improve the streets, &c. described in the Acts of 1st May and 10th July 1813, to purchase pavements; by this Act the occupiers of houses in St. Mary-le-bone are exempted, by the 79th section, from a higher rate than that made by the Paving Board of that parish, and the rates to be made under that Act were the same as by the first Act, and authorized the raising of 60,000*l.* The next Act was passed on the 21st June 1824, 5 Geo. 4, c. 100, called "An Act for more effectually paving, lighting, watching, cleansing and regulating the Regent's Park, together with the new Street from the Regent's Park and Pall Mall, and improving Parliament-street and Privy Gardens, and for maintaining a convenient Sewage for the same;" this Act of Parliament authorized the raising of 60,000*l.*

4. This is 5 Geo. 4, c. 100?—Yes.

5. Does not that Act repeal all the preceding Acts to which you have alluded, except in so far as the appointment of the Commissioners of Sewers and the powers relating to them is concerned?—I am not aware that it does.

6. Look at the end of the Preamble of 5 Geo. 4, c. 100, and see what it states?—"That the said first-recited Act of the 53d year of the reign of his late Majesty (except so much thereof as repeals any provisions in any former Act), and the said recited Act of the 56th of the same reign (except so much thereof as repeals any provisions in any former Acts), and also so much of the said secondly-recited Act of the 53d of his late Majesty's reign as appoints Commissioners of Sewers, and relates to the powers of such Commissioners, shall be and the same are hereby repealed."

7. Then to that extent all the former Acts are repealed to which you have been alluding?—Yes, it seems so.

8. The effect of that Act is to repeal the former Acts in the way I have stated?—Yes.

9. Now proceed to state what are the purposes of that Act of 5 Geo. 4, c. 100, so far as Regent-street is concerned?—Sixty thousand pounds to be raised for more effectually paving, lighting, watching, cleansing, regulating and improving the streets, squares, &c. described in the maps and plans. The first map is Regent's Park; the second is the new street, Regent-street; the third is the Crown Estate; and it directs that St. Martin's shall be paved by the parish of St. Martin, and the St. James's Committee to pay for the paving of certain streets; that the rates to be paid for the houses in Regent's Park were to be, for paving, watching, &c. 2*s.*, for watering 6*d.*, for gardens, &c. in the Regent's Park 6*d.*, making a total of 3*s.*; the paving and watching not to exceed 2*s.*, the watering 6*d.*, and the gardens 6*d.*: the Regent-street paving 2*s.*, watering 6*d.*; it does not provide for watching. It then comes to the Crown Estate: paving and watching 2*s.*, watering 6*d.*, gardens, &c. 2*s.*, and St. Martin's to be paid by the parish, St. Martin's being under parochial control.

10. I would wish to call your attention to the 15th clause of the Act, and I beg you to state to the Committee what the liability of the vestry of Mary-le-bone is, so far as this clause is concerned?—The marginal note is, "Liability of the vestrymen of St. Mary-le-bone, &c. to repair so much of the road round the north boundary of St. Mary-le-bone Park, adjacent to the south boundary of the Duke of Portland's estate, called Primrose Hill, not to be affected by this Act." That road is the exterior of the park.

11. Have the goodness to state also what streets are to be paved by the parish of St. Martin-in-the-Fields, that is in the 29th section?—"And whereas it is intended

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intended that certain of the streets, squares, passages, courts and places set out and delineated in the said map or plan marked No. 2, shall, as to the watching thereof, be placed under the superintendence of the vestrymen of the parish of St. Martin-in-the-Fields, and, as to the paving, lighting and cleansing thereof, be placed under the superintendence of the paving committee of the said parish for the time being; be it therefore enacted, that such of the said streets, portions of streets, squares, passages, courts and places set out and delineated on the said map or plan marked No. 2, as lie and are situated within the said parish of St. Martin-in-the-Fields, shall, as to the watching thereof, be watched and be under the control and management of the vestrymen of the said parish for the time being appointed by the said vestry, and as to the paving, lighting and cleansing the same, shall be paved, lighted and cleansed, and be under the control and management of the committee for the time being for paving, lighting and cleansing the said parish."

12. What is the purport of that clause; is it not to give the parish of St. Martin-in-the-Fields a power to manage the pavements and so forth of that particular district in the same way as if Regent-street were not excluded?—I believe it does. I find by the next clause, "That it shall and may be lawful for the said vestrymen and committee of the parish of St. Martin-in-the-Fields respectively to lay on and assess in each year, if they shall judge needful, one or more rate or rates, assessment or assessments, upon all houses, warehouses, shops, coach-houses, stables, cellars, vaults, buildings or tenements, or on the inhabitants thereof, in any of the said streets, parts of streets, squares, passages, courts, ways and places hereby directed to be watched, paved or repaired, lighted and cleansed by them, for defraying the expenses of watching, paving, lighting and cleansing the same; so that, nevertheless, the said rate or rates, assessment or assessments do not exceed in the whole in any one year the amount in the pound which the said vestrymen and committee are authorized to raise for the same purposes in other parts of the said parish; all the said rates and assessments to be raised, assessed, levied and recovered in the same manner and under the same powers, authorities and provisions as the other rates raised for the same purpose within the said parish are raised, assessed, levied and recovered."

13. Do not those two clauses together authorize the paving of this district, which lies within the parish of St. Martin's-in-the-Fields, with a power to them to raise what is necessary, provided the assessment does not exceed what the other part of the parish pays?—Yes.

14. Now go on with the next Act?—The next Act is that of 10th June 1825; the 6 Geo. 4, c. 38, which is intituled, "An Act for extending the Jurisdiction of the Commissioners acting in execution of an Act of the fifth year of his present Majesty, for paving and regulating the Regent's Park, together with the new Street from thence to Pall Mall, and for other purposes relating thereto." By that Act 20,000 *l.* was authorized to be raised, and the streets under the care of the surveyor-general put under the control of the commissioners, namely, Palace-yard, &c.; and the Lords and Secretary of the Admiralty were to be added to the commission; and for that purpose the paving rates were not to exceed 2 *s.* and the watering 6 *d.*; I suppose it applied to that particular district. The next Act is that of 15th July 1828, which is the Act of 9 Geo. 4, c. 64. That is an Act authorizing the raising of 50,000 *l.* more, and to extend the jurisdiction to Parliament-street, Bridge-street, New Palace-yard, and Albany Road, Albany Road being near the Regent's Park; and it provides that the rate for Carlton Gardens shall not exceed 2 *s.*, for Westminster Mews 5 *s.* These are the places described in the plan, which I have not here; additional watch-rate for No. 1 and No. 3, which are the Regent's Park, and what is called the Crown Estate in the Act of 21st June 1824; the additional watch-rate for those places, viz. Nos. 1 and 3, mentioned in the former Act, was to be 1 *s.*, and, in lieu of the former rates for Regent-street, &c. &c., 2 *s.* 6 *d.* The next Act and the last Act, I believe, is the 23d June 1832, the 2d Will. 4, c. 56, which is an Act to extend the jurisdiction of the commissioners by including George-street, St. Margaret's Church-yard, Cockspur-street and Charing Cross; the same commissioners as in the former Act; and then it provides that St. Martin's parish should pay a rental. By the 13th section of that Act it is provided, "That the said committee for lighting and paving the parish of St. Martin-in-the-Fields shall pay or cause to be paid to the commissioners for executing this Act, or their treasurer for the time being, the clear annual sum of 653 *l.*, to be applied by the said commissioners in manner hereinafter mentioned,"

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to be paid half-yearly; and by the 15th section it was provided, "That the said Commissioners for executing this Act shall not lay or assess any rate or assessment under the power hereinbefore in that behalf contained, upon any houses, churches, chapels, places of religious worship, hospitals, schools, shops, warehouses, coach-houses, stables, cellars, vaults, or other buildings or spaces of ground abutting or fronting the footways of Cockspur-street and Charing Cross, unless and until the said annual sum of 653*l.* hereinbefore mentioned to be paid by the committee for lighting and paving the parish of St. Martin-in-the-Fields, or some half-yearly payment thereof, or some part thereof, shall be in arrear for the space of forty days next after the same shall become due." Then the 18th section provides, "That nothing in this Act contained shall be construed or taken to abridge, or in any manner affect the powers of the said committee for paving and lighting the parish of St. Martin-in-the-Fields, to pave, repair, light, water, cleanse and regulate the footways of Cockspur-street and Charing Cross-street, and that the said committee shall and may, and they are hereby required and directed from time to time to lay and assess such rates and assessments, under the powers now vested in them of laying rates and assessments, as shall from time to time enable them to pay the said annual sum of 653*l.* hereby made payable by the said committee." If I construe the Act rightly, and which I understand to be the fact, the same committee assess the persons still belonging to the parish, and they pay no more than the occupiers of the other parts of the parish to the general rates.

Now the first allegation in the petition is, "That the occupiers of houses in that part of Regent-street which is situated in the parish of St. Mary-le-bone are exempt from a higher rate than 9*d.* in the pound." The first witness we call in support of that is Benjamin Warden.

Mr. *Benjamin Warden*, called in; and Examined.

Mr. *B. Warden.*

15. WHAT are you?—I am paving clerk to the parish of St. Mary-le-bone.

16. Are the occupiers of houses in that part of Regent-street which is situated in the parish of St. Mary-le-bone exempt from a higher rate than 9*d.* in the pound?—The rate for the last year was 9*d.* in the pound for cleansing, paving and lighting in Mary-le-bone; here is the rate-book to prove it.

17. What part of it?—The whole of Regent-street, east and west.

18. Do you mean that part of Regent-street in Mary-le-bone parish?—Yes, the same rate applies to the whole parish.

19. That includes paving, lighting and cleansing?—Yes, the same as in other parts of the parish.

20. What did you state you were, Mr. Warden?—I am paving clerk of the parish of Mary-le-bone.

21. How long have you been so?—Three years come November.

22. What is the name of your surveyor?—Robert Skate.

23. What is the expense at which the parish of Mary-le-bone have been able to lay down the paving, and to take care of the paving for the last three years, per cubic yard?—Five-pence is the average for street paving.

24. Do you mean to say that the repairs of all the parish are at 5*d.* per cubic yard?—It has been 4¾*d.* and 4½*d.*; but taking the average for the last three years, it will be 5*d.* per square yard.

25. Is that the average of any one street, or the whole parish?—That is the average of the whole parish.

26. What is the average of Oxford-street?—That is a M'Adamized road; the average of Oxford-street, per square yard, is from 1*s.* 9*d.* to 1*s.* 10*d.*

27. What was the expense per yard of the M'Adamizing, or what you please to call it, of Oxford-street, in 1832?—The average for the last four years has not been more than from 1*s.* 9*d.* to 1*s.* 10*d.*; that is the last four years' average, as nearly as possible.

28. What was the paving rate in 1832?—From 1*s.* 9*d.* to 1*s.* 10*d.*

29. Do you mean to state it did not exceed 2*s.* in 1832?—I am perfectly confident it did not.

30. What was it in 1833?—I cannot tell you to a farthing; I looked at my books before I came away, and I know it was not more than from 1*s.* 9*d.* to 1*s.* 10*d.*

31. Do you mean to state, that in 1833 it did not exceed 1*s.* 10*d.*?—I think it did not, speaking from memory.

 32. What

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32. What was it in 1834?—In 1834 it was not more than that upon an average.

33. More than what?—Not more than 1*s.* 9*d.* to 1*s.* 10*d.* It was cheaper in 1834, if any thing, to what it was in 1833.

34. Which was the dearest year?—1832 was much dearer than 1834.

35. Can you state what the whole cost was in 1832 for cleansing and granite paving Oxford-street?—The cleansing is quite separate to the repairs.

36. What was the gross amount of the cleansing in 1832?—I cannot tell you.

37. What was the cost of the chipping tools and labour in 1832, in Oxford-street?—To speak from memory, I think it was near 2,000*l.*

38. Was it 3,000*l.*?—I think not.

39. What was the gross amount in 1833?—In 1833 it was a trifle less than in 1832.

40. What was the gross amount in 1834?—That I cannot tell exactly.

41. Have you any documents here?—I have all the documents as to Regent-street; I did not expect to be asked these questions.

42. Regent-street is a M'Adamized street, is it not?—Yes.

43. How much did that cost per square yard?—It is much less than Oxford-street.

44. How much?—Not above 1*s.* 5*d.*

45. Do you mean to say that Regent-street, which is M'Adamized, is 1*s.* 5*d.* per yard?—From 1*s.* 5*d.* to 1*s.* 6*d.*

46. In what year?—In the years 1831, 1832 and 1833, taking them together, the average would be that; it was less in 1833, in consequence of more money being laid out in 1832, and more in 1834 than in 1833, more money being laid out then.

47. There is no particular levy on each particular street, according to what that street costs the parish?—No.

48. The whole inhabitants in Regent-street, in the parish of Mary-le-bone, are charged exactly the same as the inhabitants of the other streets are?—Precisely so.

49. I suppose if each street was to be charged exactly the sum the particular street cost, it would give an infinite deal of trouble in point of accounts, and give great dissatisfaction to the inhabitants?—I presume it would.

50. Would it not make a rating of somewhere from 50 to 100 different amounts to the inhabitants of the parish?—It would make as many different amounts as there are streets in the parish.

Mr. *A'Beckett.*—The next allegation of the petition is, "That the occupiers of houses in the parish of St. Martin-in-the-Fields are subject to no higher rate than made by the Paving Committee of that part." In support of which allegation we call Philip Henry Le Breton.

Mr. *Philip H. Le Breton,* called in; and Examined.

Mr. *P. H. Le Breton.*

51. WHAT are you?—A member of the paving committee of St. Martin's-in-the Fields.

52. Do the occupiers of houses in the parish of St. Martin's-in-the Fields pay a higher rate than made by the paving committee of that parish?—They do not; no part of the parish pays a higher rate than what is assessed by the paving committee.

53. How much is that in the pound?—One shilling; it is 1*s.* on two-thirds of the rent, consequently it is only equal to 8*d.* in the pound on the whole rent. The parish includes Charing Cross and Cockspur-street, and part of Whitehall, and out of the paving rate we pay to the Commissioners of Woods and Forests the sum of 653*l.* a year.

54. For those parts?—Yes, under the 2d Will. 4. c. 56.

55. What is done by the Commissioners of Woods and Forests for that sum of 653*l.*?—They M'Adamize a part of Charing Cross; I do not exactly know how much, and Pall Mall East.

56. Pray do you consider the payment of 653*l.* a bargain between you and the Commissioners of Woods and Forests?—The payment was made in consequence of a bargain which was come to between the parish and the Woods and Forests.

57. Do you consider it a good bargain or a bad one for the parish?—I consider it a very good one.

58. Do you conceive that it costs the Commissioners more money than you pay them?—I should imagine so. I do not know.

59. If

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Mr. *P. H. Le Breton.*

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59. If that portion which is now paid for by the 653*l.* was thrown on the parish in general, are you inclined to suppose that a higher rate would be necessary?—I think so; more money would have to be raised.

60. When you say it is 8*d.* in the pound on the rack-rent throughout the parish for paving, I suppose the actual expense of the different streets varies a good deal?—It is for paving, cleansing and lighting.

61. If that was to be spread over the different streets, the expense, in some streets, would be much more than they are in other streets?—Yes.

62. The great thoroughfares cost more than those streets which are not much frequented?—Yes, such as the streets that run down to the water's edge, and the streets about the Adelphi, they are very little expense to the parish.

63. There is, comparatively speaking, little traffic there?—Yes.

64. And the Strand costs a great deal more than those streets?—Decidedly.

65. Can you give any opinion to the Committee, supposing the Strand was to be paid for separately from the other streets, what expense that would be in the pound in the parish?—I cannot answer that question.

66. Can you state at all the proportion of the expense per square yard in the Strand to that of the less frequented streets?—The Strand has been recently paved on a very good plan, and very little expense has been incurred upon it since the outlay; there was a great expense in the original outlay of paving the whole street; the new system of paving in making the foundation comes very high indeed.

67. Supposing you put the outlay out of the question, what expense should you say the Strand cost yearly keeping it in repair?—I cannot answer that question.

68. Would it not be a great relief to the persons in the parish if somebody else paid the expense of paving the Strand now?—Clearly.

69. Can you state what sum of money was laid out on the Strand?—No, it was before I had any thing to do with the Paving Board.

70. You now make one rate for the whole parish; but if you were required to rate each street strictly according to the exact expenditure of that street, I suppose you would have a great many different ratings, almost as many as there are streets in the parish?—Certainly, to some persons it would be a great relief, to others a great grievance; the inhabitants of the Strand would be highly taxed, and the inhabitants of the streets running from the Strand would be taxed hardly any thing.

71. As a general system, you think it would not give satisfaction, and it would give a great deal of trouble?—Most decidedly a great deal of trouble, a great many separate accounts would have to be kept, and it would be productive of great dissatisfaction, one street paying more than another, though close adjoining.

72. And probably cause a great number of complaints, each street being jealous of the other?—Yes; at present I am not aware of any complaints.

73. I suppose there would be considerable complaint if the bargain was broken with you?—The paving committee would not like it.

74. Do you believe that the general body of the parish would like it?—I do not think they would like the bargain to be broken now.

75. Under the impression that they would be charged much more than they are now charged?—Yes; it would cost them much more than they now pay.

76. Supposing the bargain was broken, and those parts now paid for by that bargain, which cost the parish 653*l.* should be thrown upon the parish, and taken care of by the parish, would the parish like or dislike that?—I think they would dislike it, we do not wish for any change.

77. You have an additional reason, which does not apply to other parishes, for being pleased with the present state of things; you are only paying 8*d.* upon the rack-rent, and you find that other parishes are paying 9*d.* and 10*d.* at least?—I believe at present we are lower than most parishes.

Mr. *A'Beckett.*—The next allegation is, "That the occupiers of houses under the control of the Paving Committee of St. James's, are now paying only 3*d.* in the pound per annum, whereas your petitioners are now, and for several years past have been, rated at 2*s.* in the pound for paving and lighting and cleansing only, and which amounts to nearly double what your petitioners annually pay for poor, county and police." That allegation requires three proofs, for the first of which I beg leave to call Mr. Jehoshaphat York.

Mr. *Jehoshaphat York*, called in; and Examined.

Mr. J. York.

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78. I BELIEVE you are clerk to the Paving Board of St. James's?—Yes.

79. Was not the last year's rate for paving, cleansing and lighting 3*d.* in the pound?—Yes, 3*d.* in the pound.

80. State what that included?—It included the whole of the repairing, cleansing and lighting, that is, upon the rental made upon a survey of the parish.

81. Does that include any part of the M'Adamized?—We have but little M'Adamized in St. James's, only Pall Mall, from Waterloo-place to Cockspur-street.

82. Is the repair of M'Adamized roads much more expensive than paving?—Much more.

83. The United Service Club-house and the Athenæum I believe are under the jurisdiction of the parish part?—Yes.

84. And the Commissioners of Woods and Forests the other part?—Yes, and for which the Commissioners of Woods and Forests pay.

85. What do you receive from the Woods and Forests?—The Woods and Forests pay for the United Service Club-house 10 guineas per annum.

86. What frontage does it take?—They are rated on the square yard, 420 square yards.

87. Do you do the pavement in Pall Mall?—Yes, the paving in front of the houses, and the Athenæum Club-house, and the opposite corner of Waterloo-place, both east and west, are under the jurisdiction of the Commissioners of Paving of St. James's parish, and the Commissioners of Woods and Forests pay for those houses 6*d.* per square yard, and we receive for the Athenæum 6*l.* 19*s.* per annum, and for the United Service Club-house 10 guineas.

88. Do you know what the Woods and Forests receive from those respective houses?—I have not the slightest idea what they receive.

89. Do you not know what those respective houses pay to the Commissioners under the New Street Act?—I have not the slightest idea what they pay.

90. State to the Committee what the frontage is?—I can only tell you the gross amount of square yards on the right of those houses, 278 square yards the Athenæum, and the United Service Club-house is 420, and that at 6*d.* a yard gives the amount.

91. What do you receive?—Six pounds nineteen shillings for the Athenæum, and 10 guineas for the United Service Club-house.

92. I believe there are other corner houses in Regent-street, partly abutting on Regent-street, the sides extending in that street under your jurisdiction?—Yes; the houses abutting on the line of Regent-street in the parish of St. James are also rated at 6*d.* a yard on the amount of square yards; the gross amount received from the Commissioners of Woods and Forests is 104*l.* 9*s.* per annum, that is including the whole of the corner houses.

93. Is the Opera-house in St. James's parish?—Yes.

94. What does that pay?—The same as all large buildings pay, 6*d.* in the pound.

95. Is it 6*d.* in the pound that is paid by the Woods and Forests for the United Service and the Athenæum?—Yes, they pay 6*d.* in the pound.

96. They are buildings that could hardly be assessed at their positive value?—They are assessed at their positive value for the relief of the poor.

97. What is it that they pay for the relief of the poor?—I am not aware.

98. Can you not state whether the same sort of arbitrary sum is put upon them as for the other payment?—I cannot.

99. What does the Opera-house pay?—Thirty-two pounds twelve shillings and sixpence per annum.

100. Can you state to us what other houses of Pall Mall under the separate jurisdiction of the St. James's Paving Board cost per square yard?—No, I have no data to go on with respect to that; I was totally ignorant that I should be asked any question about it.

100*. Does that cost to pave more or less than the other parts of the parish?—Very considerably more, inasmuch as there is great traffic there and greater wear upon that line of road than any other part of the roads in the parish.

101. Do you mean to say that the M'Adamized streets throughout the district of St. James are in a good state of repair?—Yes.

102. Do you mean to say they are not wearing out at all?—We have very few streets in the parish that are M'Adamized; there are some streets, such as Saville-

row

row and other streets which of course do not have near the wear that that part of Pall Mall has.

103. Is there not a part of Piccadilly under your jurisdiction which is partly M'Adamized?—No, none of it.

104. Can you tell us what the expense of Pall Mall is?—I cannot.

105. Is there not a part M'Adamized where the traffic is not so great as that by the Opera house?—There is a very small portion of Pall Mall that is M'Adamized; a great part of Pall Mall was repaved a few years back by order of the Board.

106. You cannot tell us the difference of expense between M'Adamizing and paving?—No, I cannot.

107. Can you give us any thing like a general idea by the yard?—I should say it would be about three times the amount. I can state, so far as the wear of Pall Mall is concerned, that I am satisfied it would cost three times the amount.

108. Supposing you wanted to M'Adamize a street, or supposing you wanted to repave the street, which would cost the most?—I consider the repaving, if properly done, would cost the most.

109. And you think the annual expense would be two-thirds less?—Yes.

110. How long have you been surveyor of the parish?—I am clerk to the Paving Board.

111. Who was the late surveyor?—Mr. Farrell.

112. Is not St. James's-square extra-parochial?—Yes, they have a local Act as well as Golden-square.

113. Is Golden-square also under a local Act?—Yes.

114. Any other part of the parish?—None, except those two, St. James's-square and Golden-square, and the line of road belonging to the Woods and Forests.

115. That is only as to part of St. James's-square?—No, the south side is not.

116. What is the amount of rate received by the Paving Board for the whole of the parish, excepting that part under the control of the Commissioners of Woods and Forests?—Two thousand seven hundred and twenty-two pounds five shillings.

Mr. *Martin Farrell*, called in; and Examined.

117. WHAT are you?—I was formerly the surveyor of pavements for the parish of St. James.

118. You have heard the evidence of the last witness, that the paving rate in the parish of St. James is now 3*d.* in the pound?—Yes.

119. And they are rated on the rack rent?—I believe not.

120. The highest rate that was ever paid, I believe, was 1*s.* 8*d.* in the pound?—Yes.

121. Did not that 1*s.* 8*d.* remain for several years, while the improved system of paving was introduced in the parish?—Yes.

122. Used you not to have small stones to pave with, very small, and not any thing like square?—Yes, that is the fact.

123. Of late years we have had stones very nearly cubical, have we not?—We have had.

124. Did they not cost an immense sum of money?—Certainly.

125. Are we not reaping the benefit of the capital expended ten years before?—Most assuredly.

126. Was not the rate formerly what was called the nine-sixteenth rate, not on the rack-rent as it is now?—Yes.

127. How long were you surveyor of pavements?—Thirty years.

128. How long have you ceased to be so?—Six months.

129. Can you state what is the difference in the expense between the M'Adamizing of the road in Pall Mall and the paving the road in Pall Mall per yard?—About 2*s.* 6*d.* per yard.

130. Do you mean to say that the M'Adamized part of Pall Mall cost 2*s.* 6*d.* per yard?—Two shillings and eight-pence per yard.

131. What does the paving part of Pall Mall cost wholly independent of the first outlay?—Not more than 4*d.* per yard.

132. In explanation of what you say about the 2*s.* 8*d.*, has not that portion of Pall Mall more traffic than the rest of Pall Mall?—The M'Adamized road has more traffic.

133. It is more travelled on?—Yes.

 134. Is

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134. Is there any part of Pall Mall which has much the same traffic, that which is M'Adamized and that which is paved?—No.

135. Can you state what the portion of Pall Mall which is M'Adamized, towards Waterloo-place, going westward, how much that cost a square yard?—I cannot say precisely; I should say, upon an average, about 2*s.* 8*d.*

136. Do you conceive that the whole of the M'Adamized road would cost about 2*s.* a square yard to keep it in order?—I think so.

137. And the pavement about 4*d.*?—Yes.

138. Then, generally speaking, you conceive the pavement might be kept in order at one-sixth of the expense of the M'Adamized road to be kept in order?—That part of it can in Pall Mall.

139. Where there is a considerable traffic there is the difference between one and six in point of expense in keeping in order the M'Adamized road and the pavement?—Certainly.

140. That is the result of your experience?—Yes.

141. Did you keep the accounts?—No, I did not.

142. By what means do you come to the knowledge of what the paving and the M'Adamizing cost?—I made a calculation of it formerly.

Mr. *A'Beckett.*—The next part of this allegation is, "That your petitioners are now and for several years past have been rated at 2*s.* in the pound for paving, lighting and cleansing only," which we propose to prove by calling the collector.

Mr. *Joseph Toogood,* called in; and Examined.

Mr. *J. Toogood.*

143. WHAT has been the amount of rate paid by the inhabitants of Regent-street, in the parish of St. James, in the last five or six years, giving the highest and the lowest?—I have no means of showing what it is in St. James's parish.

144. What do you receive in the pound?—Two shillings for paving, cleansing and lighting.

145. When was it ever less?—In 1823 it was 1*s.*; in 1824, 1825 and 1826 it was 1*s.*; in 1827 it was 1*s.* 4*d.*; in 1828, 1*s.* 4*d.*; in 1829, 1*s.* 6*d.*; in 1830, 2*s.*; and I account for it in this way: the inhabitants of Regent-street petitioned to have their rental reduced, because it affected the assessed taxes, and I believe it was so agreed that it should be reduced, and the rental was reduced on paying the 2*s.* 25 per cent. In 1830 it was reduced, the rate-books will show, 25 per cent., and 25 per cent. put on to meet it, and upon that reduction of 25 per cent. the 2*s.* has continued from that time to this.

146. It was stated by Mr. York, that part of the United Service Club-house frontage was paid by the parish; is that your handwriting?—[*Handing the Witness a Receipt.*]—Yes.

147. "United Service Club, for two quarters paving, lighting and cleansing, 84*l.* 10*s.*;" that is for half a year?—Yes.

148. For the whole year it is twice the amount?—Yes.

149. What is it for the whole year?—One hundred and sixty-nine pounds.

150. Do you know how much the Commissioners of Woods and Forests pay back to the Paving Board of the parish?—I do not know the amount Mr. York stated.

151. What are the proportions of the United Service Club-house, for instance, which is paid by the parish and that which is under the Commissioners of the new street?—Mr. York's rate-book must show that; I have no recollection at all of the particular sum.

152. Are you aware of the dimensions of the frontage?—I cannot say from recollection; it was measured by me and the surveyor of the parish.

153. I believe the committee of St. James's pave the Pall Mall part?—Yes.

154. Is the wear and tear upon that more than on the other?—Much more.

155. How much more?—Considerably more, almost two to one.

156. You receive 169*l.* per annum for the Commissioners of the new street, for paving, repairing, cleaning and lighting of the United Service Club-house?—Yes, that was received for one year.

157. Is not more than one half of the paving that goes at the sides of that building paved by the parish?—The building next the entrance to Carlton-house-terrace

terrace is rather longer than in Pall Mall; I think it is much about the same, it is a square building.

158. Then the wear and tear in Pall Mall, paid by the parish, is at least double?—I should say so.

159. And the Paving Board receive back about 10*l.*?—I should suppose that that is about the sum; I have no documents to prove it.

160. Do you happen to know whether the sum of money authorized to be raised by Act of Parliament has been borrowed?—I have no knowledge of, or any connexion whatever with, the receipts and expenditure.

161. Have you not read that part of the Act?—I have read it.

162. Are you not one of the persons who have advanced money to the Commissioners of the new street on the security of the rates?—My trustees did.

163. How much?—Five thousand pounds.

164. How much interest do you receive from that?—Four per cent.

165. How long is it since you received five per cent.?—I never received more than four and a half the whole time; the Commissioners reduced it some months ago from four and a half to four per cent.

166. Was not that in March?—Yes, I think that was about the time.

167. The interest was reduced?—Yes.

168. That is to say, that notice was given?—Yes, the notice was given in a certain form, under the Act of Parliament.

169. The notice was given by the Commissioners in March?—Yes, and assented to.

170. Do you know what the amount of debt was under the several Acts of Parliament previous to the 5th Geo. 4.?—I do not.

171. Being one of the creditors upon the estate, you could ascertain what the sum was?—Knowing as much as I do of the commission, it was not worth my while to inquire into it, I am perfectly satisfied with the security.

172. Do you collect the rents as well as the rates?—I do not.

173. Did you know the Regent's Park when it used to be called Welling's Farm?—Very well.

174. Has the Regent's Park become increased in annual value?—As regards the rates it has.

175. Has it not as it regards the rent?—I have no connexion at all with that; I should consider if the rates are increased by improvement, the other would naturally follow.

176. Do you know upon what ground-rents the houses in Regent's Park are held?—I know nothing about the ground-rents.

177. You are not a proprietor of any house in Regent's Park?—No, not a sixpence.

178. Or any thing under the Woods and Forests?—Not a sixpence.

179. Do you not know that the estate is very considerably improved?—I take it as a fact, that as the ground is covered, the more the estate is improved, certainly.

180. Does it improve the ground-rent?—I cannot say.

181. Do you know what the Colosseum pays for ground-rent?—I do not, having no connexion at all with the ground-rents; I cannot speak to that.

182. What do you receive from the Athenæum?—From recollection, I think it is 120*l.* together, including the sewage and the water.

183. Do you know what is paid back?—No, only from Mr. York's book.

184. You receive from one and pay back to the other?—Yes.

185. You receive 169*l.* from the United Service Club?—I do not make up my accounts in that way; the bills go in to the Commissioners and are certified, and a check comes to me to pay the different parties.

186. You receive 169*l.* for the Commissioners from the United Service Club?—Yes.

187. And you pay back to the Paving Committee of the parish of St. James 10*l.* 10*s.*?—I suppose it is that.

188. And the United Service Club, the part that abuts on Pall Mall, is of equal dimensions with what is under the Commissioners of the Woods and Forests, and the wear and tear is more than double?—Yes.

189. What do you pay back for the Athenæum?—I cannot say from memory.

190. What do all the corner houses of Regent-street pay that abut upon other streets?—They pay by the square yard, amounting in the whole to 104*l.* per annum.

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191. Under what authority is it done by the square yard?—I do not know.

192. Under the 78th section of the 5 Geo. 4. it is to be apportioned by the Commissioners?—Yes.

193. Can you state the total amount that you receive for the Commissioners of the new street, for all corner houses abutting upon the new street?—I cannot state at all, because the money was paid out of the rates.

194. Can you state what was received from the corner houses?—I cannot from memory; it might be extracted.

195. Can you furnish it another day?—Yes; where I have received money I can furnish the statement of what was received upon every corner house.

196. I would beg to call your attention to the 78th, 79th and 80th sections of 5 Geo. 4, c. 100. The 78th section provides, "That if any house or premises shall appear by the said maps or plans, or either of them, to be situate partly within the limits of the jurisdiction of the Commissioners under this Act, and partly in any street or place not within such limits, such house or premises shall be assessed to the rates to be raised by virtue of this Act for a proportionable part only of the rent thereof; and it shall be lawful for the said Commissioners for executing this Act, or any person appointed by them at some meeting to be holden for that purpose, and they or he are or is hereby respectively authorized and required to apportion and settle at how much and what part of the rent of such house and premises the same shall be assessed." The 79th, "That it shall and may be lawful for the said Commissioners, and they are hereby authorized and empowered, in making and assessing the said respective rates hereby authorized to be raised and assessed by them, to include in such rates and to rate the corner or return houses, shops, warehouses, cellars, vaults, buildings or tenements standing and erected at the corners or angles of any street, square, circus, terrace, court, passage or way which shall cross or branch from any of the said streets, squares, circuses, terraces, courts, ways, passages or places in or in respect of which such rates or assessments are to be made, and that the cleansing of all and every such corner or return houses, shops, warehouses, cellars, vaults, buildings or tenements shall be performed by the said Commissioners." Then the 80th, "And whereas several of the houses, buildings and premises in Regent-street, Waterloo-place, the Quadrant, and the Circus in Piccadilly, abut respectively, in part, on streets, ways, courts, passages and places under the jurisdiction, control and management of the committee for paving, cleansing and lighting the said parish of St. James, Westminster, or which, by the operation of this Act, will be hereafter paved, cleansed and lighted by the said committee; be it further enacted, that the said committee shall from time to time pay a proportionate part of the several rates and assessments to be respectively laid and assessed by virtue of this Act on the said last-mentioned houses, buildings and premises unto the said committee for or in respect of the paving, cleansing and lighting such parts of the several streets, ways, courts, passages and places upon which the said several last-mentioned houses, buildings and premises, or the sides or other parts thereof abut, such proportionate parts to be from time to time fixed by the said Commissioners?"—I think it would appear upon the books of the parish, when the late Mr. Wingfield was clerk to the Paving Board, that the Commissioners for paving Regent-street, and the parochial Board, came to this understanding, and which has been acted upon from that time. I think it will appear upon the minutes that that is the case; we were not allowed to go out of the line, right or left, in Regent-street, and they said, we will receive it and give you so much.

197. Do you know any thing at all about the rental in the Regent's Park?—Not at all.

198. Nor do you know, I suppose, officially, what money has been expended in all the improvements connected with Regent-street?—Not in the least.

199. Can you state, as a matter of opinion, whether or no Regent-street, beginning at Oxford-street and going down to Pall Mall, increases or no the value of the property in the Regent's Park, by the improvements in those streets?—I do not think it does.

200. Do you happen to know whether the houses in Regent-street are or are not valued up to their full rate?—I cannot speak to particulars, but from what I do know, I should consider the average rental in Regent-street, on which the rates are assessed, would be two-thirds of the rack-rent.

201. Do you happen to know any thing about a house, I think No. 13, Regent-street, which was advertised to be let some time in last spring?—Yes, I know the house.

202. What was the statement in that advertisement of the rent received from that house?—I believe it was 180*l.*

203. Was that No. 12 or 13?—No. 13.

204. On what rental did you levy the rates on that house?—It is now rated at 112*l.*

205. Is there any portion of that house so advertised as bringing in a rent of 180*l.*, rated to any other parties for either paving, lighting or the cleansing rate than the Commissioners of Regent-street?—No.

206. Can you state any other house in which you know the ent paid is greater than that upon which the rating is levied?—Not correctly.

207. You cannot state to us any thing precise as to the rating and value of other houses in Regent-street?—No, I cannot.

208. Have you not stated on your own responsibility to the Commissioners, or at all events to the Officers of Woods and Forests, that there is a great difference between the real value and the rating?—Yes, and if I had my documents with me I could state it.

209. Do you still abide by that declaration?—Yes.

210. How can you prove it?—By my friend, who was unfortunate in it.

211. Did you or not state to the Commissioners of Woods and Forests that there was a great difference between the rates of houses and the real rental?—Yes.

212. On what ground did you make that statement?—From the knowledge that I obtained, and the communications I got as to the rack-rent of the houses.

213. Can you state any particular house to which that observation applies?—I will state one more; I would not venture to state another, unless I had my documents; but I would state No. 238, Regent-street.

214. Who is the occupier of that house?—Thomas Carter.

215. What was the rental of No. 238, Regent-street?—The rack-rent, if I do not mistake, was 240*l.*

216. What was that house rated at?—One hundred and thirty-six pounds.

217. Was the whole of that house, for which the rent was 240*l.*, rated to the Regent-street Commission?—Yes, it was a corner house, the whole of it.

218. What became of Mr. Carter?—He is there now.

219. Have you any documents by which you can prove to the Committee, that there was this discrepancy in March last, between the rental of houses and the rating of houses?—Yes.

220. Was not the whole of Regent-street, with the rest of the parish, valued by Mr. Thompson, the surveyor of the Woods and Forests, and Mr. Mayhew, the parish surveyor?—I have a general outline in answer to that question, stating, if I now made the valuation, how the situation of the street stood after that.

221. Do you live in the parish of St. James?—Yes.

222. In what part?—In Dufaur-street, Broad-street, Golden-square.

223. State on what proportion of the rental is the rating made in the parish of St. James?—I am rated, as far as I am concerned, at rack-rent.

224. Is not that general throughout the parish?—Yes.

225. Do you mean to say that the parish of St. James, as a general principle, attempt to levy the rate actually upon the rack-rent?—No, I do not.

226. You said, as regards your own house, that you did pay it upon the rack-rent?—Yes, upon the rack-rent.

227. On the full value?—Yes, the full value.

228. Do you pay upon the full value, or do you pay upon the proportion?—I pay on the full value of my house.

229. Is that the way the rates throughout the parish of St. James are attempted to be levied?—I believe not.

230. Why do you believe not?—Because the equalized rental was put upon Mr. Mayhew's valuation

231. Is it or not the fact, that the rating of the parish of St. James is understood to be upon the real value of the house or the proportion of the value?—I cannot give an opinion upon that.

232. Do you not know, or have you not heard, that till within the last four or five years we were rated upon the $\frac{9}{16}$ths rental, then it came to $\frac{3}{4}$ths, and then it came to the rack-rent?—It came to the valued rental.

233. The annual value throughout the parish?—Yes.

234. What is the whole amount of the rates received by the Commissioners of

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Woods and Forests for that part of the parish under their controul?—I cannot state it from my memory; my documents will tell the whole amount; I shall be able to state it at the next meeting.

Mr. *Henry Rice,* called in; and Examined.

Mr. *Henry Rice.*

235. WHAT situation do you hold, Mr. Rice?—I am the vestry clerk of St. James's.

236. State what the mode of assessment was throughout the parish five years ago?—The rental of the parish was formerly assessed, with reference to the proportion of its supposed actual rental, in the proportion of $\frac{8}{10}$ths of its actual rental; in consequence of the complaint of the inhabitants, that that produced great inequality in the mode of rating, a survey took place, about four years ago, of the whole parish, and upon the principle of equalizing the assessment for that purpose, an Act of Parliament having passed to assess the inhabitants according to the rent or value, the latter principle was adopted, and the object of the survey was to ascertain the full value of the parish, and the mode adopted to arrive at that result was by the valuation of every part of the parish, of the ground in every part of the parish, fixing different ground rents according to its locality, and different streets were classed in schedules, according to the difference in value of the respective sites, extending from Schedule A. to Schedule U 2. and the ground rent was ascertained according to what, in the opinion of the surveyor, each site was worth to be let for building; the buildings erected on the different parts of the parish were then every one valued by the surveyor, to ascertain the gross value of the building; 5 per cent. upon the gross value was then uniformly taken as the annual value of the building, and that annual value of the building being added to the ground rent, produced the gross net value of every site in the parish, and by comparison with the actual rentals, it did turn out afterwards that they very nearly assimilated; but the principle upon which the assessment was made was not with reference to the actual rent parties paid, but to get at the actual full value of every property; the assessment was then made uniformly upon that.

237. Were there not a great many instances in which complaints were made that the surveyor had put on too large a value?—Yes; wherever that was the case, and the parties made it appear to the satisfaction of the surveyors of the parish, it was regulated and altered accordingly.

238. Are you aware that the vestry had been valuing too high?—Yes; the object of the valuation was to obtain the given valuation of it, and then the parties who had to impose the rate exercised their discretion when the rate was afterwards made, as to whether, according to the times or other circumstances, it would be right to take any given proportion off that gross amount; if they thought that the times had altered, so that the value of the property would be less, they took a per centage off that; the proportion for the whole parish remained the same; the vestry exercised the right they possessed of judging whether it should be continued at the value Mr. Thompson put upon it, or at a less amount; by reducing a given per centage, it did not alter the equality of the rate.

239. The value was ascertained by Mr. Thompson and another gentleman; after that new rental of the parish, was there any abatement made upon the parish?—There was.

240. A considerable one?—It has been at different times reduced; the first abatement was 10 per cent. on the rental.

241. Were the assessments made upon the diminished rentals afterwards?—Yes.

242. Entirely through the parish?—Yes.

243. Was any part of the parish assessed at a different rental than the rental established by Mr. Thompson?—Not that I know of, except by an equalized reduction; there was no other difference that I am aware of.

244. Are we to understand that the parish of St. James, at this moment, is taxed at 10 per cent. under the real value?—No; the parish of St. James is assessed at the real value, so far as it can be ascertained.

245. That is the intention of it?—Yes.

246. The full rental?—Yes, the full rental.

247. I think the present pavement rate is 2*d.* in the pound?—I know nothing of the paving rate.

248. Do you happen to know what the feeling of the parish at large would be, supposing

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supposing it was proposed to throw on the parish generally the expenses of Regent-street, and levying no more rate upon Regent-street than would be paid by the rest of the parish for paving, lighting and cleansing?—I have heard different opinions; but I cannot say what the general feeling would be. I have heard some opinions in favour of the proposition; whether it would be favourable to the parish I cannot say.

249. When you have heard the opinions expressed, were the sums to which Regent-street is liable ever taken into account?—The declarations I have heard have been with reference to the arrangements originally made in 1816. when the jurisdiction was transferred from the parish to the Commissioners of Woods and Forests, and with reference to those arrangements, I have heard a good deal of opinion expressed chiefly by the inhabitants of Regent-street, that the parish had involved them in a situation of considerable hardship and difficulty from allowing such a transfer to be made.

250. My question applies to the inhabitants of St. James's, not being residents or payers of those rates in Regent-street; do you believe that the rest of the parish of St. James would oppose the proposition of transferring to the whole of the parish the expense of paving, lighting and cleansing Regent-street, the parish being to levy an equal rate upon Regent-street with the rest of the parish?—I have no means of forming a very extended opinion upon that subject; from the reports of many persons, those with whom I have had any communication, I should say would be in favour of taking them back again.

251. Do you consider the whole of the parish would or not object to be made liable to the proportion of debt due upon the amount of rates in Regent-street?—I do not believe they have any knowledge what it is. If the matter was fairly before them and the amount of debt stated, how created, what proportion of it was due at the time the transfer was made of Regent-street from one jurisdiction to another, they would have the means of judging. I have never heard this explained myself in any way that I could form an opinion upon it. I believe there was a considerable debt existing in some parts of what is the new jurisdiction of what is called Regent's Park, at the time this was transferred from the parochial jurisdiction to the jurisdiction of Woods and Forests.

252. Have you means of forming any guess at all upon the subject from any knowledge you possess upon it? You stated just now, in answer to a question put to you, that you could not say whether the whole of the parish would, upon consideration, assent to it?—I do not believe any part of the parish have the means at present of forming a judgment upon it; they must have an opportunity of knowing what the liabilities are that they would take upon themselves.

253. Have we not an account of 7,000*l.* which is due to the parish by the Commissioners?—At the time the Act of Parliament was applied for, for transferring Regent-street from the parochial jurisdiction to the jurisdiction of the Commissioners of paving the new street, the transfer was opposed in the House of Commons; petitions were presented, and an opposition meditated on behalf of the then vestry, to the proposition for transferring Regent-street to the jurisdiction of the Commissioners of the Woods and Forests, and the opposition was relinquished upon an agreement, after considerable treaty, that the new Commissioners of Pavements were to purchase all the old pavement that had belonged to the parish for the sum of 7,000*l.* The matter thus rested from that time to the present, or till nearly the present, without its being ascertained whether the 7,000*l.* was paid. A correspondence has recently taken place with the Commissioners for paving Regent-street, and it appears the money was not paid; there is no evidence of any payment having been made of it; we find no payment recorded in the parish accounts of that 7,000*l.* and it appears, in letters which I can show from the Woods and Forests, that they are not aware that the 7,000*l.* was ever paid.

254. What proof have you of the agreement?—The minutes of the vestry state the agreement to have been made, and the triennial report of the Commissioners themselves states the fact also, and there is no doubt that such an agreement was made, but the money was not paid. The third report of the Commissioners refers to the Act of the 56th Geo. 3. c. 128. under the head Observations, and this is the statement: that the same Bill which contained the before-mentioned clauses with respect to sewers, contained also provisions for the paving, lighting and watching the new street, and that that part of it which relates to these objects having passed into a law, we have, under the authority before mentioned, agreed with the Commissioners of Paving for the parish of St. James, to purchase the materials of all

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the old pavements on so much of the line of the street as is within the boundaries of the parish; and the pavement of this particular new street is now placed under the jurisdiction of Special Commissioners of Pavement appointed under the Act. This states generally that such an agreement had been made, and the evidence we have of it is the minutes in our vestry book: "Mr. Willock reported from the Committee appointed by the Paving Board, to meet the promoters of the New Street Paving Bill, and adjust the compensation to be made to the parish, in case the said Bill should pass into a law, for the old pavement, &c. on the line of the new street. The Commissioners of the New Street Act had agreed to pay the sum of 7,000*l.* for the old pavement and the lamps, and the other materials belonging to the Commissioners of Pavements, and the watch-boxes, which agreement the Committee conceive to be very favourable to the parish." That is the evidence of the amount that was agreed to be paid for it, and their Report to Parliament is evidence of the fact of an agreement having been made. The circumstances of the payment seem to have been lost sight of till recently. On the 9th of March 1834, in consequence of an inquiry made, application was made to the Commissioners for the Pavement of the New Street, to which application the following answer was returned:

Sir, Office of Woods, &c. 9th May 1834.

I am commanded by Lord Duncannon to acknowledge receipt of your letter of this day, transmitting copy of a resolution of the parish of St. James, to the effect that a deputation of the vestrymen should wait upon his Lordship, to obtain information as to the payment, about the year 1816, of a sum of 7,000*l.* in compensation for old pavement and other materials; and I have to suggest that it is unnecessary to trouble the vestrymen to come to this office, as no payment whatsoever has been made out of the funds of this department, for the purposes to which the minute of the vestry refers, subsequent arrangements having been made under which the whole of the new pavement of Regent-street was executed by this Board.

I have, &c.

Henry Rice, Esq. (signed) *A. M. Robertson.*

We cannot trace any circumstance of any such arrangement having been made. We then applied again, and received the following answer:

Sir, Office of Woods, &c. 14th July 1834.

I am commanded by the Commissioners for carrying the New Street Act into execution, to acquaint you, in answer to your letter of the 7th instant, that it was in contemplation, about the year 1816, to have made arrangements with the Committee for paving the Parish of St. James, for purchasing from them the old pavement of Swallow-street and other streets, altered under the New Street Act; but that, in consequence of difficulties which occurred during the progress of the negotiation, the purchase was not effected.

I am, &c.

Henry Rice, Esq. (signed) *A. Milne.*

I rather differ from that. Then on the 18th February in the present year, we received another letter from Mr. Milne:

Sir,

With reference to your letter of the 18th December last, on the subject of the sum of 7,000*l.*, which it is therein stated was to have been paid for the old pavement and other materials in St. James's parish, on the occasion of Regent-street being withdrawn from the Parochial Committee and placed under the jurisdiction of the Crown Paving Commissioners, I have to observe that the New Street Paving, &c. Commissioners were authorized by the Act 56 Geo. 3. to treat and agree for the purchase of the old pavement, and other materials of the streets withdrawn from the Paving Committee of the parish of Saint James, and a negotiation took place with a view to such purchase; that a portion of the old pavement appears to have been relaid, partly in Regent-street and partly in adjoining streets; but that there is no minute, correspondence or other entry, to be found in the books or papers of the Commissioners under that Act, or of the Commissioners under the New Street Act, 53 Geo. 3., from which it would appear that any money whatever was paid from the funds of those Commissioners, or either of them, to the Paving Committee of the parish of Saint James, or to any other Parochial Board; or that the Commissioners ever received, or had credit for any monies on account or in respect of the said old pavement and materials.

I am, &c.

Henry Rice, Esq. (signed) *A. Milne.*

255. Was the pavement ever delivered?—I believe so. I cannot state positively.

256. How long have you been vestry clerk?— About five years.

257. The clerk of the Paving Board at that time is dead?—Yes.

258. If

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258. If a retransfer of this assessment of Regent-street could be made to the parish generally, the effect would it be, would it not, that the general assessment of the parish would be larger than it is now?—Certainly, with respect to pavements, the assessment would be upon the whole value of Regent-street.

259. If there was this retransfer, do you not think that the other parts of the parish would pay probably more than they do at the present moment?—Yes.

260. That being the case, is it not likely that the rest of the parish would object to such retransfer?—It depends entirely upon what the amount would be fairly chargeable against them to be repaid. I have not heard the subject discussed with reference to the particulars.

261. If the rest of the parish would, upon the retransfer, pay more than they do now, would not the rest of the parish naturally object to such retransfer?—I think they would.

262. Would the rest of the parish derive any corresponding advantage from the sacrifice they would make in taking this upon themselves?—It is impossible to say, without knowing what the sacrifice would be, or the advantage they would gain.

263. What possible advantage could they gain; they have now the means of passing through the streets, which is the only advantage they could have?—It depends upon what the rental is, what the amount of the assessment would be that they would receive from it, and the expense that it would subject them to.

264. Could the other parts of the parish gain any thing whatever?—I should say they would not; without having any other materials to judge by, I cannot conceive that they would.

265. How much of Regent-street is assessed to the parish of St. James for other purposes besides this?—The map will show the whole of Regent-street that is in the parish of St. James.

Mr. *A. Beckett.*—Then there is another part of the allegation which states that the amount paid for paving, lighting and cleansing, is nearly double what is paid for poor, county and police, and in support of that allegation I will call Mr. John Griffiths.

Mr. *John Griffiths,* called in; and Examined.

Mr. *John Griffiths.*

266. YOU live in Regent-street?—Yes, I do.

267. What do you pay the Commissioners of the new street for paving, lighting and cleansing?—Nineteen pounds five shillings.

268. What do you pay for the poor, county and police rates by the year?—Ten pounds eight shillings.

Mr. *James Roberts,* called in; and Examined.

Mr. *James Roberts.*

269. DO you live in Regent-street?—Yes, I do.

270. What do you pay to the Commissioners of the new street for paving, lighting and cleansing?—Seven pounds ten shillings.

271. What do you pay for the poor, county and police?—Three pounds eighteen shillings.

Mr. *George Churchman,* called in; and Examined.

Mr. *G. Churchman.*

272. WHERE do you live?—No. 66, Regent-street.

273. What do you pay the Commissioners of the new street for paving, lighting and cleansing?—Eleven pounds ten shillings a year.

274. What do you pay for poor, county and police?—Six pounds five shillings.

Mr. *Robert Wilson,* called in; and Examined.

Mr. *Robert Wilson.*

275. WHERE do you live?—No. 153, Regent-street.

276. What do you pay the Commissioners for paving, lighting and cleansing?—Seventeen pounds ten shillings.

277. What do you pay for poor, county and police?—Nine pounds eight shillings and four-pence a year.

Mr. *Joseph Crookes,* called in; and Examined.

Mr. *Joseph Crookes.*

278. WHERE do you live?—No. 147, Regent-street.

279. What do you pay the Commissioners for paving, lighting and cleansing?—Thirteen pounds a year.

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280. What do you pay for poor, county and police?—Seven pounds one shilling and eight-pence.

281. What rental do you pay to the parish? how high are you rated to the parish for the poor?—I think about 95*l.*

282. How high are you rated to the Regent-street Commissioners?—I think about 105*l.*

283. One hundred and five pounds to the Commissioners and 95*l.* to the parish?—Yes, we are rated 10*l.* higher by the Regent-street Commissioners than by the Parish Board.

Mr. *James Graham*, called in; and Examined.

Mr. *James Graham.*

284. WHERE do you live?—No. 206, Regent-street.

285. What do you pay for paving, lighting and cleansing?—Seventeen pounds ten shillings a year.

286. What do you pay for poor, county and police?—Nine pounds eight shillings and four-pence.

287. What are you rated to the Woods and Forests?—One hundred and forty pounds a year.

288. What to the parish?—One hundred and twenty-six pounds.

Mr. *John Pugh*, called in; and Examined.

Mr. *John Pugh.*

289. WHERE do you live?—No. 157, Regent-street.

290. What do you pay to the Commissioners for paving, lighting and cleansing?—Eleven pounds five shillings.

291. What do you pay for the poor, county and police?—Six pounds one shilling and eight-pence.

292. Upon what rental do you pay to the Commissioners?—Upon 90*l.*, and 73*l.* to the parish.

Mercurii, 22° die Julii, 1835.

SIR FRANCIS BURDETT, BARONET, IN THE CHAIR.

Mr. *Stephen Lewis*, called in; and Examined.

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293. WHERE do you live?—No. 195 and 197, Regent-street.

294. What do your houses pay to the Commissioners of the new street for paving, lighting and cleansing per annum?—Thirty-eight pounds a year.

295. Is not some part of your premises in St. George's and some part in St. James's?—Yes.

296. What do you pay for that which is in St. James's parish for poor, county and police?—Five pounds eight shillings and four-pence.

297. What do you pay for that in St. George's?—Eleven pounds thirteen shillings and four-pence.

298. Is the proportion of your premises in St. George's greater than that in St. James's?—Yes.

299. To what extent?—There is not above one-third in St. James's parish.

300. Altogether, how much do you pay?—Seventeen pounds one shilling and eight-pence.

301. Are you not a vestryman of the parish of St. George?—Yes.

302. Have you not been so for the last three or four years?—Yes.

303. From the time of the adoption of Sir John Hobhouse's Act?—Yes.

304. Was there not a great deal of complaint in your parish with respect to the mode of assessment and rating three or four years ago?—Yes, there was.

305. In consequence of that, were not two gentlemen, Mr. Harrison and Mr. Rayley appointed to value the property?—Yes, they were appointed to value the whole parish.

306. Did they survey the parish?—Yes.

307. And is the rating and rental of the parish taken upon that value?—Certainly, upon the value they gave in.

308. Have you any reason to doubt that is the correct value?—That is the correct value, I understand.

309. Are

Mr. *Stephen Lewis.*

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309. Are you aware whether the rental upon which the rates in Regent-street are made under the Commissioners of the new street is greater or less than the real rental?—I should say generally less.

310. To what extent do you mean to say the rental upon which the rate is made is less than the real rental?—I should think not to a great extent. The houses are valued according to the business that is attached to them. There are houses with various businesses attached to them, and which are more valuable in consequence of those businesses being attached to them.

311. According to the business that is attached to them, they are of more or less value to the occupier?—Yes.

312. Can you give any answer as to any other house except your own in the street?—I cannot.

Mr. *George Buzzard,* called in; and Examined.

Mr. *G. Buzzard.*

313. WHAT are you, Mr. Buzzard?—I am clerk to the governors of the poor of the parish of St. James.

314. What is the average annual amount of the poor, county and police rates of the whole parish of St. James for the last year?—Twenty thousand five hundred and twenty-two pounds seventeen shillings.

315. What was the amount paid by the inhabitants of Regent-street and Waterloo-place for that period?—Two thousand five hundred and ten pounds fifteen shillings and sixpence.

316. That is nearly equal to one-eighth of the whole?—Yes.

317. And that is exclusive of what is paid by the petitioners for the houses in Regent-street which are within St. George's parish?—Yes.

318. Can you state what was paid by the United Service Club-house for the last year?—One hundred and fourteen pounds one shilling and sixpence, poor, county and police.

319. And what for the Athenæum?—Seventy-two pounds.

320. Can you state what is the average of the number of poor in the workhouse last year?—I should say the average number was 700, in round numbers.

321. What proportion of that 700 were inhabitants of Regent-street?—Of householders I should say none; I am not prepared to say how many of any other class, because the servants who gain a settlement in Regent-street would have a right of admission into the workhouse.

322. Can you say whether there are any from that place?—I cannot; I do not recollect a single case.

323. Can you inform the Committee what amount has been paid by the Poor Board to the Commissioners of His Majesty's Woods and Forests?—I cannot.

324. You are not aware of the sum that has been paid?—No, I am not aware of it; I am not in a condition to answer the question as to figures in any way.

325. To the best of your recollection, was it above 20,000*l.*?—I cannot say at all; the sum was not paid during my official acting there.

326. Was any part of it paid?—I cannot exactly say; I think 500*l.* was paid during my acting.

327. You cannot say whether the whole sum was 20,000*l.* or 100,000*l.*?—I cannot.

Mr. *Robert Lees,* called in; and Examined.

Mr. *Robert Lees.*

328. WHAT are you, Mr. Lees?—I am clerk to the Committee of Paving of St. George's, Hanover-square.

329. Can you state what the actual rental of the parish is?—Five hundred and fifty-two thousand seven hundred and sixty-one pounds.

330. That is the sum on which the rates are made?—Yes.

331. What is the amount out of that borne by the occupiers in the line of Regent-street, which is in St. George's parish?—The rent of the houses in Regent-street, as compared with the rent of the whole, is about a two hundred and seventy-sixth.

332. Can you state the rental of that part of Regent-street which is in St. George's parish?—Two thousand six hundred and sixty-six pounds is the rental of the houses situate in Regent-street, which is in the parish of St. George.

333. Which is about the 276th part of the whole parish?—Yes, it is so.

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334. Is it the same proportion of the rental which is charged upon the whole parish, including Regent-street and the rest of the parish?—Yes.

335. Upon what principle do you rate the houses in the parish?—Within about two years ago the whole property of the parish, so far as the rating was concerned, was valued by two surveyors, and it is upon their return that the sum is required.

336. Can you inform the Committee upon what principle they proceeded in making their valuation?—I do not know.

337. Is it your opinion that the same scale is regulated throughout the whole parish?—I have no doubt about it.

338. Do you know whether it is upon a proportionate rental or the rack-rental that the rates are levied?—I do not know that fact.

339. Is the parish of St. James rated upon the rack-rent?—I think we are not rated on the rack-rent in our parish.

340. It was surveyed by competent persons, Mr. Harrison and Mr. Rayley?—Yes, Mr. Harrison and Mr. Rayley.

341. In what year?—In 1833.

342. Do you know upon what principle that valuation was made?—I do not.

343. It was not considered to be upon the value of the property?—Certainly not, not the rack-rent; it might exceed the actual rental in some cases and be below it in others; I cannot speak of it with certainty.

Mr. *Henry Rice*, again called in; and further Examined.

Mr. *Henry Rice.*

344. HAVE you made an investigation of the Parliamentary Reports made from time to time, and ascertained the origin of the new street, and the expenses that have hitherto attended the undertaking?—I have. In the first place, the project was opposed by the vestry of the parish of St. James, and a petition presented to Parliament. At a vestry held 5th May 1813, the Board proceeded to take into consideration the expediency of a petition to the House of Commons against the Bill depending in Parliament for making a new street, &c., through this parish, and thereupon the Report of the Committee appointed by vestry on the 30th of November last, to wait upon the Chancellor of the Exchequer and the Commissioners of Woods and Forests and Land Revenues, to represent the great expense and the other objections that had occurred to the Board against the undertaking in question, was read by the vestry clerk; and the vestrymen present having inspected a copy of the map or plan referred to by the Bill, as taken by Mr. Thompson, of Argyll-street, from the original, hung up in one of the committee-rooms of the House of Commons, and also a plan prepared by the said Mr. Thompson himself for the intended line of communication, and having put several questions to him as to the comparative advantages of the two plans in a parochial point of view, and deliberated for some time on the whole of the matter, it was resolved, "That a petition should be presented to the Honourable House of Commons against the Bill in question and the plan thereby referred to;" and a form of such petition being produced and read by the vestry clerk, the same was approved by the Board, subject to some alteration to be made in the last paragraph thereof; and it was ordered that the same, with such alteration, be re-engrossed and laid before the Board on Friday next at twelve o'clock, to which time it was proposed that this meeting should be adjourned. On the 7th of May, while the Bill was pending in the House, there was a vestry held, and the vestry clerk read at the Board the engrossed petition of the vestrymen of this parish against the Bill now depending in Parliament for making a new street, &c., from the south end of Portland-place to Charing-cross, with the alterations directed at the last vestry, which being unanimously approved of, was signed by all the vestrymen present, and is as follows; videlicet:—

To the Honourable The Commons of the United Kingdom of *Great Britain* and *Ireland*, in Parliament assembled.

The Humble Petition of the several persons hereunder named, being Vestrymen and Inhabitants of the parish of *St. James*, within the liberty of *Westminster*, in the county of *Middlesex*.

Sheweth,

That your petitioners are informed that a Bill is depending in your Honourable House for making a new street or line of communication from the south end of Portland-place, in the parish of St. Mary-le-bone, to Pall Mall, at or near St. Alban's-street, in the said parish of St. James, according to a plan hung up in one of the committee-rooms of your Honourable House,

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House, and giving powers to cause considerable alterations to be made in several of the adjacent streets in the said plan specified.

That the line of the said proposed street will cut through the parish of St. James from Pall Mall aforesaid to Oxford-street, a distance of three quarters of a mile, and your petitioners are informed that more than 450 houses in the said parish are intended on this occasion to be taken down and demolished, besides the Market-house and shops in St. James's Market.

That the destruction of so much property will cause a very considerable defalcation in the collection of the poor-rate (now as high as 4*s.* 4*d.* in the pound) and other rates and assessments in the parish during the progress of the works, and unless provision be made for indemnifying the parish in that respect, the parochial burdens will unavoidably be increased, and should the plan ultimately fail, the parish would be very materially injured, not only by the means just mentioned, but by the deplorable state in which the greater part of the parish would be left in consequence of such failure, and the loss of St. James's Market would, in any event, prove a great inconvenience to many families in the parish, and make a considerable difference to the middling and lower orders in supplying themselves with the necessaries of life, which, without the competition of a market, would be much higher in price.

That the distress which many of the parishioners must feel, and the inconvenience to which they must be put on being driven from habitations to which they are attached by birth, neighbourhood or connexions, and for the loss of which no pecuniary compensation that can be expected to be awarded to them can ever make them amends, and who, to the number of between 400 and 500 in the said parish only have, as your petitioners are informed, petitioned your Honourable House against the said Bill, excite, in the minds of your petitioners, sentiments of commiseration, and induce them to hope that your Honourable House will pause before you proceed to sanction a plan which is likely to bear so hard upon the individuals concerned, and which may also eventually prove so injurious to the parish.

That if, however, it should be the determination of your Honourable House to authorize the undertaking in question to be carried into execution, your petitioners humbly beg leave to suggest that several alterations might be made in the plan referred to by the Bill, which would, in the opinion of your petitioners, make the proposed line of communication more commodious to the public and the inhabitants of the adjacent streets, and occasion a less destruction of property in the parish and a less deficiency in the amount of the rates and assessments, both parliamentary and parochial, during the progress of the works.

That your petitioners also submit to the wisdom and justice of your Honourable House, that no project of this kind, intended for ornament to the town, should be undertaken without ample provisions of indemnity both to the parish and to individuals, for every possible loss they may sustain in consequence thereof.

Then on the 17th of May a vestry was held, and "The vestry clerk read at the Board drafts of several clauses to be inserted in the Bill now pending in Parliament for making a new street, &c. through this parish, which he had prepared in pursuance of the order made at the last vestry, and which are to the following effect; viz.—Clause 1. To enable the Commissioners for executing the Act to stop up sewers and drains, and to oblige them to make new ones in lieu. 2. To require the Commissioners to fill in the ground of the new street, &c., and to pave over them, and affix at proper distances lamp-irons, lamps and watch-boxes, to be approved by the Vestry and Paving Committee respectively. 3. To require the Commissioners to make good to the rector and officers of the church and trustees of the new chapel and burial-ground all deficiencies in annual stipends, Easter dues, obventions or oblations, and church duties (commonly called surplice-fees and burial-ground fees) to be occasioned by the operation of the Act. 4. To require the Commissioners to make good to the different Boards in the parish all deficiencies in the assessments to the land-tax, poor-rate, paving, cleansing, lighting and watching, and repair of the church, &c. 5. To determine the payment of all such deficiencies when the assessments upon the new buildings produce a larger sum than would be produced by the houses and buildings to be taken down if assessed at their present rental. 6. To oblige the Commissioners to make compensation to all persons who may sustain damage by the Act. 7. To limit the time for purchasing houses and buildings for the purposes of the Act. 8. To secure certain openings into the new street, namely, a carriage-way from the lower part of Mary-le-bone-street, nearly opposite Sherrard-street, and two open courts or footways into Vine-street and the upper part of Air-street, and for widening the lower part of Swallow-street. All which clauses were approved by the Board, subject to several alterations directed to be made therein." All these clauses are introduced into the Act. The modifications they received in the Act of Parliament are embodied in the 41st clause, 53 Geo. 3: "And be it further enacted, That in the designing and laying out, opening and making such streets and places, and in the erecting or rebuilding such dwelling-houses and other buildings as above-mentioned, the said Commissioners shall, by and out of the monies to be raised by virtue of this Act, in a substantial and workmanlike manner, fill in all and every

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the vaults, cellars and open places over which it may be necessary to repave (except such as shall be used again as cellars, vaults or areas, with good sound, hard brick rubbish, or other sound and proper materials, to be well rammed down every three or four inches thick, to prevent the ground from giving way; and do and shall, out of the monies so to be raised as aforesaid, well and effectually pave over all the ground of the said new and intended streets and places with the materials of the present pavement, as far as they will extend, and with a sufficient quantity of new materials, of like quality and dimensions, to supply the deficiency, and shall and will, in like manner, and by the like means, relay and repair all and every part of the streets, ways, courts and passages which they shall disturb or alter in carrying the purposes of this Act into execution; and moreover, that the said Commissioners shall, by and out of the same monies, provide, place and affix such proper and substantial lamp-irons, with lamps and burners for lighting the said intended new streets and places, of such dimensions and quality, and at such distances from each other, and painted and finished in such manner as shall be approved by the respective vestrymen, committees or directors for the time being, for paving, cleansing and lighting the said respective parishes, and also, in like manner, provide, place and affix, at proper distances from each other, good and substantial watch-boxes for the watchmen of each of the said respective parishes, and such as shall be approved of by the vestrymen, committees, or directors of the said respective parishes for the time being; provided nevertheless, that nothing herein contained shall extend or be construed to extend to charge the said Commissioners with repairing or making good such pavements, lamps, lamp-irons or watch-boxes in future; but that from and after the same shall be so paved, relaid and repaired as aforesaid, and such lamps, lamp-irons and watch-boxes provided and finished as aforesaid, the same shall for ever after be kept in repair by and at the expense of the said parishes to which the same shall respectively belong; and that the right and property of all pavements, stones and bricks, posts, lamps, lamp-irons, lamp-posts and watch-boxes, so to be laid, erected and fixed up as aforesaid, shall belong to and be the property of the said respective parishes in the same manner as things of a like description in other parts of the said parishes respectively are at the present vested by law." Then the next minute is with reference to the alterations projected in the law; it is dated 20th May 1816: "The vestry clerk read at the Board the 41st section of the New Street Act, requiring the Commissioners to pave the intended street, and to affix lamps, lamp-irons and watch-boxes throughout the line thereof at the expense of the Crown in the first instance, and declaring that the right to such pavement, &c. &c. when done should be vested in the several parishes through which the street should pass, who should henceforward be required only to keep the same in repair." And he read also some of the clauses in the Bill for amending the said Act, by constituting an extra Board of paving, lighting, cleansing and watching, with an establishment of officers to be paid by the inhabitants of the said new street, and also by repealing the 41st section above mentioned, and throwing the expense of the new pavement, lamps, &c. on the inhabitants of the said street; whereupon the Board took the same into consideration, and were unanimously of opinion that the provisions of the said Bill were highly objectionable, and would tend to the material injury of the occupiers of houses and premises in the said new street; and being informed that a committee from the Paving Board of this parish were now at the office of Woods, for the purpose of making arrangements with the promoters of the Bill for obtaining compensation for the old pavement, to be taken up and removed, and for ascertaining the amount thereof; resolved and ordered that the vestry clerk do immediately attend the said meeting, and prevent, if possible, any terms for that purpose being finally agreed on, and also represent to the Commissioners of Woods the objection of this Board to the provisions of the said Bill, and should he find that it is the intention of the Commissioners to proceed with the said Bill in its present form, that he do prepare a petition to the House of Commons against the same, and lay it before the Board at its next meeting." The next minute was given in evidence the other day of the agreement finally made with respect to the 7,000 *l.* for the paving, and the agreement we also proved was not carried into effect so far as that the 7,000 *l.* was not paid; the power to pay the 7,000 *l.* is to be embodied in the Act to be subsequently passed; the agreement under which the petition was withdrawn was previous to the Act passing.

345. Was that power embodied in the Act?—The power was embodied in the Act, but not actually acted upon.

346. Can

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346. Can you prove that the pavement was delivered?—Yes.

347. The pavement for which 7,000*l.* was to be paid was delivered?—Yes. Then as to the allegation of the petition which was presented, it appears by the Reports made by the Commissioners of Woods and Forests to Parliament; the first Report of the Commissioners of Woods and Forests contains the first mention of this project of a new street. The date of that first report is June 1812, it first notices the Crown property in Mary-le-bone Park, and the plans which were suggested for its improvement, and the principle which appears in a great measure to regulate the inquiries. It is a triennial Report. After stating what the views of the Commissioners were with regard to the improvement of Mary-le-bone Park, it goes on to state: "New communication from Mary-le-bone Park to Westminster. The present distance, and in many parts mean and inconvenient access from Mary-le-bone Park to the parts of Westminster between that and the Thames are manifest drawbacks on the value of the estate; and a more direct and commodious line of communication, while it would enhance the value, would also improve to a great extent that of other property both of the Crown and individuals situate in the above district. This important object had not escaped the attention of Mr. Fordyce, who has explained his ideas of the local and general advantages which would accrue from such an improvement judiciously executed, in his fourth triennial Report. It appeared to us to be so essentially connected with the subject of Mary-le-bone Park itself, that in our instructions on that subject we particularly directed the architects to consider of the best and most practicable means they could devise for the accomplishment of so desirable a work, and to accompany their reports and designs with descriptions of the line of street they should respectively propose, with estimates of the sums which might be required for its execution, and statements of the manner in which they should think such expense might in the whole, or in what proportion be afterwards made good to the public. In answering this part of our instructions, Messrs. Leverton and Chauner referred us to a line of communication they had recommended to Mr. Fordyce, upon a survey made by them in December 1808, and transmitted to him by their letter bearing date the 27th of that month. It is the same line which Mr. Fordyce suggested in the passage we have referred to at the end of his fourth Report, and proceeds in a direction pretty nearly straight, and with a breadth of 70 feet from the Pantheon, till it coincides with the Haymarket, terminating at the east end of Pall Mall. The expense they estimated at 290,000*l.*, and the value of the fee-simple of the ground when vacant for building, with frontage to the street, together with the materials, at about 236,000*l.*, leaving a deficit of 54,000*l.* Mr. Nash has proposed a street 100 feet wide in a less direct line, but which would have the advantage of falling with Portland-place and proceeding so as to terminate opposite to Carlton House, through streets where many of the houses belong to the Crown and are held under lease, several of which have actually expired and others are nearly expiring. He estimates the original expense which would attend the execution of every part of his scheme at 399,803*l.* besides the value of the materials of the buildings, which would be to be purchased, but calculates on the other hand that the rents to arise from the sites of houses on each side of the new street would amount to 28,734*l.* per annum, a sum which would defray the interest of the original expenditure and supply a sinking fund for the liquidation of the capital." The date of that Report is 4th June 1812, and then it refers in the Appendix to Mr. Nash's plan, and he states all the advantages, particularly as to the improvement of the Crown property, not with reference to the public so much as the Crown property. Mr. Nash's Report states, "The new street direct from Charing Cross to Mary-le-bone Park proposed in your instructions to me, would be of such advantage to the Crown lands of Mary-le-bone Park, by the additional value it would give to that property, as alone to justify the Crown in carrying it into execution, and of such advantage to the nobility and gentry occupying the principal houses in the west and north-west corners of the town, in their communication with the Houses of Parliament, the Courts of Law, the Treasury, Admiralty and other public offices in the lower parts of Westminster, that I have considered it under three distinct heads: its utility to the public, beauty to the metropolis, and the practicability of the measure; and have drawn a plan, showing the course of the street proposed and its connexion with the adjoining streets. There is no direct way from the end of Bond-street to the principal streets north of Oxford-road; but Portland-place will form one continued street from Charing Cross, intersecting many of the principal streets north of Oxford-street at right angles, and afford the nearest and best communication from Charing

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Charing Cross to every part of that magnificent and extensive neighbourhood, and if the utility of such a street to that part of the parish of Mary-le-bone would be so great, the advantage of it to the Crown lands of Mary-le-bone Park would be incalculable." Then he gives a very florid description of the advantages to be derived from it. Mr. Nash in a letter to the Commissioners of Woods and Forests states, "The main object of the Crown I conceive to be the improvement of their own estate, to augment and not diminish it, and not to sell any part of it; a magnificent and convenient street for the public will be the result, not the cause. The Crown property in Mary-le-bone Park in extent of ground is greater than all their London property besides; and to make it more productive in proportion as it is more extensive only requires the street in question; time will do the rest, and Mary-le-bone Park one day become a very prominent feature in the list of Crown revenue. To accomplish this purpose, however desirable, if the whole street had passed through property not belonging to the Crown, it might become a nicer question whether the object in view was commensurate with the expenses, and whether the public convenience of the street would justify the arrest of so much private freehold; but it fortunately happens that four parts out of five of the property, through which the street will pass, belong to the Crown, and the greater part of the rest to the Duke of Portland, who will be as much benefited as the Crown itself, seeing that it leads into the very heart of his best property, Portland-place, to which there is at present no appropriate access. The Crown property consists principally of old ruinous houses laid out in narrow streets, the greater part not worth repair, many of them in ruins, the leases of which are continually falling in; independently, therefore, of considerations belonging to Mary-le-bone Park, it would be the interest of the Crown, instead of renewing the leases of those old houses, to take them down, form a better arrangement of wider streets, and let the ground on building leases. On these principles are my valuations formed; without waiting the slow progress of leases falling in, I have supposed the Crown leases bought up, the old and ruinous houses taken down, and a wide street formed susceptible of high ground rents, well secured, and with an immense reversionary interest at the end of sixty-one years." You have in evidence the Act by which the new street is required to be made; the next Act of Parliament I do not believe is on your notes, which is the Act of 54 Geo. 3. chap. 70, June 17th, 1814. That is an Act which provides the means; it recites the New Street Act, and provides the means for carrying it into execution; and also the appropriation of the revenues of the Crown, and of sums of money amounting to 600,000*l.*, besides the 600,000*l.* authorized to be raised under the New Street Act; and the appropriation of those monies after Parliament had allowed them, to be expended by the Commissioners in the execution of the New Street Act. The appropriation clause is clause 21: "And be it further enacted, That all and every the rents, fines, bank annuities, dividends, and other the monies by this Act respectively directed to be paid, transferred and made over to, or raised by the said Commissioners for executing the said recited Act of the 53d of the reign of his present Majesty, shall from time to time be applied by them for and towards carrying the several purposes thereof into execution, and as a fund in aid of the two several sums of five hundred thousand pounds and one hundred thousand pounds thereby authorized to be raised on mortgage, and such time as the said two sums shall be raised and thereafter fully paid and satisfied." This Act of Parliament has never been repealed, and is still the existing law for the appropriation of those monies to the several purposes for which that money was to be applied; one of those purposes was the paving of the streets and the making of the pavements, and other matters necessary for carrying the whole into execution. The subsequent Act of Parliament has been already referred to, 56 Geo. 3; that gives additional power to raise additional funds by the modes there mentioned, in addition to the money authorized to be raised by the 54 Geo. 3, which amounted to 667,191*l.* 14*s.* 1*d.* The rates were to be raised, and the amount of the rates appear, by a Return of the Commissioners to Parliament in the year 1833, and the amount of the rates that had been assessed by them on the inhabitants of Regent-street, in addition to the funds authorized to be raised by 54 Geo. 3, amounted to 145,495*l.* 9*s.* 7*d.*, contributed by the inhabitants. Then it appears also by a similar return, that under the authority of that Act of 54 Geo. 3, and the subsequent Paving Acts, that the Commissioners had borrowed a sum of 90,000*l.* between the year ending Midsummer 1825, and the year ending Michaelmas 1829; they had borrowed these monies under the authority of these Acts, and the Commissioners also gave credit for the sum of 4,273*l.* 5*s.* 11*d.*, miscellaneous receipts

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receipts for which they accounted under the authority of previous Acts. The public also, it appears, contributed to the undertaking; besides the sums authorized to be paid out of the Crown Revenues, in the year 1820, two grants out of the supplies of 100,000*l.* each; and in the Session of 1824 a further sum of a Parliamentary grant of 400,000*l.* was received from the Treasury on account, which, I believe, are all the sums which appear to have been contributed, besides the sums that were raised from the land revenues of the Crown. The account I hold in my hand is an account showing the balance in favour of the public and in favour of Regent-street, in the parish of St. James; and the balance they have contributed beyond their proportion of the monies that were applied for their benefit and for the benefit of St. James's is 710,109*l.* 10*s.* 8*d.*

348. Is that account which you hold in your hands the result of the returns?—Yes, it is the result of the returns of the Commissioners themselves.

[*The following Document was handed in and read.*]

The Commissioners of His Majesty's Woods, Forest and Land Revenues, in respect of their improvement of the Crown Estate in *Mary-le-bone Park*, in account with the Public, the inhabitants of *Regent-street* and the parish of *St. James, Westminster.*

Drs.	£.	s.	d.	Crs.	£.	s.	d.
To Cash received from the public in full of two sums of 100,000*l.*, each voted by Parliament from the Consolidated Fund (1820), and of one sum of 400,000*l.*, voted 1824, after deducting fees at the Exchequer - - -	594,998	12	–	By Cash paid, expenses of paving, lighting, watering, cleansing, &c. Regent-street, from the commencement of the improvement of the Crown estates in 1813 up to 5th January 1829 - -	37,384	10	11
To Cash assessed on the inhabitants of Regent-street, &c., by rates for paving, lighting and watering, from Midsummer 1821 to Midsummer 1832 - - -	145,495	9	7	Balance obtained from the public, the inhabitants of Regent-street and parish of St. James, for the benefit and improvement of the Crown estate - - - -	710,109	10	8
To Cash by old pavement obtained from St. James's parish, as per price agreed and not paid for - - -	7,000	–	–				
£.	747,494	1	7	£.	747,494	1	7

349. By this document it would appear that the assessment on the inhabitants of Regent-street amounted to 145,495*l.* 9*s.* 7*d.*?—Yes.

350. On the other hand, you take no account of the sums of money laid out in taking care of the street during the same period?—No, I have no means of ascertaining that.

351. All you state is that the sum of money received from the public, the sum of money raised upon the inhabitants, and a certain sum of money which you state to be due from the Commissioners to the parish of St. James for the purchase of pavements, making a total of 747,494*l.* 1*s.* 7*d.*, as the debtor account between the period of 1820 and 1832?—Yes, that is the debt.

352. On the other hand, you only give credit to the Commissioners to the amount of 37,384*l.* 10*s.* 11*d.* for cash paid for the expense of paving, lighting, watering, cleansing, &c. Regent-street?—They are all I can find that have been paid out of the monies; I have carefully looked through the Report, and that is the only sum I can find out of all the money that has been expended.

353. You know nothing at all what money has been expended in paving, and so forth, Regent-street annually?—I have no means of ascertaining that.

354. You have no knowledge what expense the Crown has been at for building or buying houses in that part of it?—I have not the means of ascertaining what the actual expenditure of the Crown has been.

355. I observe here you say, "To cash received from the public in full of two sums of 100,000*l.*, each voted by Parliament from the Consolidated Fund (1820), and of one sum of 400,000*l.* voted (1824), after deducting fees at the Exchequer, 594,988*l.* 12*s.*," that you say is cash received from the public in various ways from the Consolidated Fund, and you charge that as against the Crown property when you do not know in what way it has been expended; what do you mean by that?—The

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—The use I suppose to be made of it is this; if the street is to be returned again to the parish, or the inhabitants themselves, or any other persons, it would be the means of adjusting what proportion of the expenditure that has hitherto taken place would fairly fall on the Crown, as far as its own benefit and advantage have been derived from it, and what proportion should fall upon the inhabitants of the parish, if the street should be returned to them what proportion they are to pay.

356. I should rather consider that the large debt owing to the public on account of Regent-street is a reason that no more additional burden should be thrown upon the public?—It is not a debt, it is a gift.

357. Does it appear to you, because the public has advanced 600,000*l.* in forming a street, that that is a reason they should advance more?—No, but it is a reason why the Commissioners of Woods and Forests in adjusting what amount should be paid hereafter, should not claim to have the whole expense of the undertaking, inasmuch as the public have advanced so much.

358. Then all you mean to say is, that that debt of 594,998*l.* 12*s.* is the only sum to be charged against the inhabitants?—I should say that the inhabitants, who are a part of the public, have no right to be charged with a proportion of that contribution made by the public for the general undertaking; that the inhabitants would have no right to be charged with any part of that fund by assessment upon themselves, and no right to be charged in account with the Crown for any part of the expense contributed by the parish, which is, I believe, only 7,000*l.*; the rates were all paid when the assessment was made, and there is no claim made by the Crown upon that.

359. Does it not come out from your own statement that nearly 600,000*l.* has been advanced by the public for the formation of the street?—Yes, that appears to be the result of the Acts.

360. Do you mean to say that the parish have contributed in any way to the payment of the interest or the repayment of the principal of tht sum?—Only as part of the public generally.

361. Then your statement is simply this, that nearly 600,000*l.* has been paid by the public for the formation of the street?—That was towards the undertaking in general.

362. You cannot say to what extent the street has been benefited out of that sum?—The Commissioners had the power to apply it in any way they pleased; how they applied it we do not know; all they applied for the benefit of the inhabitants of Regent-street was 37,384*l.* 10*s.* 11*d.*, and that sum which I have mentioned they have received, and all they have applied is 37,384*l.* 10*s.* 11*d.*

363. Supposing any persons undertook this improvement, do you consider it is a reason that because they laid out a large sum of money they should lay out a still larger?—If done with other objects.

364. As a lawyer, and as an inhabitant of the parish of St. James, is it not the invariable custom that when a house is taken down and the pavement is displaced and taken up before the house, always to restore it again?—It was under a contract between the parish and the Commissioners of Woods and Forests that they should do that.

365. Suppose you were to remove the pavement before your house for the purpose of improving and repairing your house, would you not have to restore the pavement as between you and the parish?—I have no doubt they would compel me to restore the pavement.

366. Are you not aware it is the custom?—Yes, I think it is the custom.

Mr. *James Roberts*, called in; and Examined.

Mr. *James Roberts.*

367. DO you live in Regent-street?—Yes.

368. Did you appeal to the Commissioners for paving the Regent's Park for being over-rated?—I did.

369. In what year?—Last year, the year 1834.

370. Did the Commissioners entertain your complaint?—They did.

371. Did you receive relief?—I did not.

372. Were you satisfied with their decision?—I cannot say I was.

373. Did you make any other complaint to the Commissioners of the Paving Board?—I beg leave to state that I received this answer from Mr. Adams, clerk of the Paving Board in the Office of Woods and Forests:—

Sir

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Sir, Office of Woods and Forests, 12th January 1835.

James Roberts.

I am directed by the Commissioners for paving Regent's Park, Regent-street, Whitehall, &c., to acquaint you that they have had a letter before them from Mr. Mayhew, stating that in pursuance of their instructions he has again surveyed the houses Nos. 95 and 97, Regent-street, the disproportionate value set by him thereon having formed the chief ground of your appeal against the rates assessed upon the former of those houses, and that he sees no reason for changing his opinion respecting the value of your house, No. 95; but that he considers he has rather undervalued the house No. 97, the rate assessed upon which, for the present year, will consequently be altered.—(That is not the house I live in; that did not affect me.)—Under these circumstances the Board command me to acquaint you that they would not feel themselves warranted in making any reduction in your rates, and regret that they cannot therefore comply with your request in that respect.

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I am, &c.

Mr. Roberts, 95, Regent-street. (signed) *William Adams*, for Mr. Robertson.

374. Do you collect the rate for watering the streets of any part of St. James's parish?—Yes, I do; I collect the division called the Church Division; perhaps I may state that my object in introducing the subject was merely to convince the Committee that this is no new subject, but repeated and continued complaints have been made to the Commissioners of Woods and Forests, with regard to the rating and the heavy expense that has been borne by them. Mine is not a single case; there were at the time I appealed 30 or 40 more.

375. Name the streets that are watered in your collection?—Old and New Burlington-street, Clifford and Cork-streets, Burlington Gardens, and Saville-street, M'Adamized; Saville-street, Piccadilly, from the Haymarket to Bond-street, York street, M'Adamized, and Jermyn-street.

376. What distance of ground should you call all the several streets enumerated? Are you of opinion they occupy as much ground to water as Regent-street and Waterloo-place?—I am of opinion, off hand, without having measured the ground, that the distance watered by order of the parish is twice the length of that watered by the Commissioners of Woods and Forests.

377. Have you any account of the charge made upon the inhabitants of Regent-street and Waterloo-place for watering?—Yes, I have; I have here an account furnished by the late Mr. Robertson, clerk to the Paving Board. Balance excess of expenditure 892 *l.* 18 *s.* 5 *d.* The balance due from the public to the Commissioners in 1829, 669 *l.* 7 *s.* 1 *d.*; in 1830, 200 *l.* 3 *s.* 9 *d.*; in 1831, 194 *l.* 3 *s.* 5 *d.*; in 1832, 191 *l.* 18 *s.* 2 *d.*; in 1833, 259 *l.* 5 *s.* 11 *d.* for watering streets.

378. And what is the amount you collect for all the streets you have enumerated on account of the Paving Board of your parish?—One hundred and fifty-five pounds seventeen shillings and sixpence halfpenny is the amount that I have collected on the part of the parish for all the streets that I have enumerated; so that it appears by this comparative statement that the sum charged by the Commissioners of Woods and Forests is double, and in some years three times as much as that charged by the parish over half the distance of ground, supposing I am right in the distance, in one year; in the last year it was 195 *l.* 16 *s.* 2 *d.*, nearly 50 *l.* more than what the parish waters the whole of the streets for.

379. Do you mean to say it is double the distance?—Yes; I speak under correction.

380. Do you mean, when you say it is double the distance, that it is double the number of superficial feet, or the length?—Certainly.

381. Are those streets generally as great a thoroughfare as Regent-street?—I should call Jermyn-street a considerable thoroughfare.

382. Is it as great a thoroughfare as Regent-street?—No.

383. Is Saville-street?—No; but I should say that Piccadilly is.

384. Which takes the most water, the M'Adamized road or the pavement?—That I am not competent to say; still I can take on myself to say that the parish water the streets twice a day and the Commissioners of Woods and Forests do the same. The inhabitants of Regent-street have had reason to complain very frequently, and upon one occasion I had to attend upon Lord Granville Somerset and apprize him of that fact.

Mr. *Charles Mayhew*, called in; and Examined.

385. WERE you ever employed by the Commissioners for the management of Regent-street, to survey the houses and value them?—Not exactly employed to value

Mr. C. Mayhew.

Mr. C. Mayhew.

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value the houses in Regent-street. Mr. Thompson and I were jointly employed by the parish of St. James to make a valuation, which we did.

386. In point of fact, were you employed as well by the parish of St. James as the Commissioners of Regent-street, to value the houses?—Exactly.

387. Did you make the valuation?—Yes.

388. Upon what principle did you make the valuation?—We took the whole of the parish. We first of all classed the whole of the streets of equal value; and I believe the only streets of equal value with Regent-street we met with were St. James's-street and Waterloo-place: that is, to continue the line straight up to Oxford-street. We then took the size of every person's ground, and the premises then upon it; and we calculated what they would cost to erect, and we took an interest of five per cent. on the outlay. We then added to that the value of the ground according to what we conceived to be the real value. We added those together, and the two results formed the rental of each particular house.

389. In making the valuation of Regent-street, you employed the same principle you did in regard to St. James's-street?—We did.

390. Did you consider the traffic of St. James's-street was of the same lucrative character as Regent-street?—We thought the situation equal.

391. Did you put the value up to the full amount you thought the different houses would fetch, supposing they were brought for sale, or for letting into the market?—We put them at what we considered to be the real value, that is, the standard value. We did not take the value of the houses according to what the occupiers in Regent-street receive, if we had, we should have assessed persons for their lodgers. You will find in Regent-street that many of the inhabitants are obliged to live in kitchens or garrets to support the rent they pay. They are obliged to let off a great portion of the house to pay the rent, that is a matter of fact; and if you mean by rack-rent what the house let for, we certainly did not do that.

392. Did you in the same manner value the houses in St. James's-street?—Yes, precisely upon the same principle: that is, if two houses were of exactly the same size, and the same in each street, they were rated precisely in the same manner.

393. Do you mean to say that the persons who live in St. James's-street have the same habits which you have described as belonging to those in Regent-street, as to letting their houses to lodgers?—I think so as to the tradesmen.

394. Do you consider the facility of trade in St. James's-street is the same as in Regent-street?—Yes; only perhaps the rent may not fetch so great a sum in St. James's-street as in Regent-street.

395. Suppose the rent to be the same for property in Regent-street and St. James's-street, for which house would you give the largest sum, having exactly the same calibre; would you give the same sum for the one as for the other?—Yes.

396. Then do you think that the present rental in Regent-street is a more deceptive rental than in St. James's-street?—Most decidedly it is a deceptive rental; and I would not advise, if any body was to come to me as a professional man, and ask my opinion,—I am speaking generally of the rental in Regent-street,—as to whether I should advise him to purchase upon the then rental, I should say no.

397. That is to say, that the houses in Regent-street at this moment do furnish a larger rent than the houses in St. James's-street, which is to the benefit of the owner thereof; but you would not think it a safe investment if you were obliged to buy upon the high rental in Regent-street?—Certainly I should not buy on the high rental in Regent-street.

398. With regard to the whole of the parish of St. James, to what extent did you go in valuing the rest of the parish; upon what principle?—Upon the same principle. We established a set of scales. After taking the size of any particular house, we took the houses in every street, and in every place we found them.

399. Taking the houses in every street, there was no street you thought so valuable to shopkeepers at least as Regent-street and St. James's-street?—No, certainly.

400. Not Bond-street?—Certainly not; but there are not above a dozen houses in Bond-street which is in St. James's parish.

401. Take Piccadilly, what difference do you think should be made between that and Regent-street?—We had schedules from (A.) down to (P.), and our first object

object was to class the streets in the way which we considered to be the proper and regular order. In Schedule (A.) we put Regent-street and St. James's-street, which we considered to be the most valuable part. Then we took in Schedule (B.), the Albany, &c., and in Schedule (C.) the Quadrant, &c. With regard to the Quadrant, we put that lower than Regent-street, because it was confined to a certain sort of architecture; and situated as it is, we were obliged to make some difference as to that.

402. In making this classification, what data did you go on?—The data we took was what the ground let for in Regent-street, which was 3*l.* a foot 40 feet deep, and we thought if we took it at 3*l.* a foot for 50 feet deep, we should establish to a certainty that we were rather below than above the mark.

403. Then, if I understand right, the general object of the survey was not so much to get at the real value of the different property, but the comparative value?—Equality of rating throughout the parish.

404. You did not care whether you took the property at the highest value it would fetch, provided you put them all on an equality; that was the object; you did not care whether you put a house of 100*l.* down at 80*l.*, provided every other house worth 100*l.* was put down at 80*l.*; that was the principle on which you went?—We did not take the rack rent, but what we considered it to be, the real intrinsic value, the value would not be lower.

405. What you took care of was, that it should be always the minimum of each house?—The fair value.

406. Without reference to any particular circumstances?—We took the whole of the houses in Regent-street, and put them into different schedules, and those different schedules I have. Certain houses in Regent-street might be worth more than *l.* and we removed them into Schedule (A.)

407. I want to know whether you went into the merits of the localities of each particular house?—If there was any advantage attached to any particular house we took that into consideration; for instance, with respect to certain houses in Regent-street, we were told by Mr. Farquhar that there was a difference in the situation of those houses, and that they were more valuable than other houses in that street, and upon looking at them I considered them to be so, and I removed them a schedule higher in consequence. So we have done in Regent-street if any particular reason was given for making a deviation from the line of street.

408. I understand, Mr. Mayhew, your opinion is, without going into any particular case, that the valuation upon which the houses in Regent-street are now rated by the Commissioners of Regent-street, is exactly the same amount of valuation with regard to the real value as it is with regard to the parish of St. James?—Yes, I think so.

409. I believe your father and Mr. Thompson were employed to ascertain the real value of every house in the parish?—I will read the letter of instructions that was received.

[*The following Document was put in, and read.*]

Gentlemen, Parochial Office, St. James's, May 21, 1831.

I AM directed by the Board of Governors and Directors of the Poor to acquaint you that the Board of Vestry has approved of the agreement entered into between them and you for making a general survey and valuation of all the property rateable to the relief of the poor in this parish.

I am also directed to request that you will proceed, with as little delay as possible, to make the survey and valuation accordingly.

I am, &c.

Messrs. Thompson & Mayhew, Surveyors. *W. Stone*, Clerk to the Board.

And this is the order that I received from the Commissioners of Regent-street:

AT a Meeting of the Commissioners for paving Regent's Park, Regent-street, Whitehall, &c., held at the Office of Woods and Forests on Saturday, February 15, 1834,

Lord DUNCANNON in the Chair.

The Clerk laid before the Board Mr. Mayhew's valuation of the yearly rental of the ground, houses and buildings in the line of Regent-street from Pall Mall East to Oxford-street.

Ordered, That Mr. Mayhew proceed forthwith to value, in like manner, the ground, houses and buildings in the Regent's Park, Whitehall, Parliament-street, Great George-street, and other streets and places within the jurisdiction of this Board.

Duncannon, Chairman.

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410. Have you valued the other property accordingly?—We are now proceeding to do it.

411. Are you valuing it on the same principle?—Precisely on the same principle as they are valued here.

412. I believe you received great commendation from the Commissioners for the mode in which your valuation was made?—It was approved; unless the Commissioners had approved of it they would not have ordered me to proceed with the valuation of the other property. We agreed to give them the rental which we fixed on the parish of St. James. They wished that the rest of the property should be valued upon the same principle.

413. In making the valuation, had you any reference at all to the actual rent of the houses that you valued, or did you make any inquiry of any tenant what they paid, or had you any means of information of what the actual rent might be?—We gained all the information we could.

414. Having ascertained the ground-rent in the different classes according to the locality and the value of the buildings, according to their costs, by which you got the gross amount of the building, and you got the annual value; you then took five per cent. on the gross amount?—Yes.

415. You took five per cent. on the gross amount of the building, and the amount of the ground-rent, and that gave the valuation?—Yes.

416. Had you any reference to the rent paid by the tenant, or was it independent of the rent? Did you at all refer to the rent that was paid in addition to those two circumstances?—Decidedly, because every house is made up of two things; there is the cost of the building put upon it, and there is the ground-rent; putting those two together will produce the rental of the houses in those streets; if we considered the rent to be fair that was paid for those streets, we put the ground-rent and the building-rent together, and that produced the actual rental.

417. Supposing you found, after you had completed your valuation on one house on the principle you mention, you found it did not accord with the rent paid, did you make any difference in the valuation with reference to the rent paid by the tenant?—If we had fixed the ground-rent too high, and we found that the rent that was paid for the house was a fair rent, we should put them in another schedule.

418. Have not instances of that kind occurred?—In some instances we have valued them too high, and we did not know that till we had valued all the other houses.

419. When Mr. Roberts made an appeal to the Commissioners of Woods and Forests, were you present?—Yes.

420. When he appealed, were there not a great number of persons appealing besides him?—Yes.

421. There was more than one appeal?—Yes.

422. Were there two persons present when he made the appeal?—I dare say there were twenty in the room.

423. Did not the Commissioners apply to you in all cases where there was a dispute?—Yes.

424. Supposing you were desired to value the ground-rent of any one house in Regent-street, do you conceive the valuation would be more or less than what is now paid to the Crown?—Rather less than more, because we fixed our ground-rent at 3*l.* a foot for 50 feet deep, and they charged originally three guineas a foot for 40 feet deep.

425. Do you think three guineas a foot is about the real value of the ground-rent, if disposed of?—No.

426. What would be the value of that rent of three guineas a foot for 40 feet deep, if disposed of in the market now?—That is a question that requires a good deal of consideration before answering.

427. Supposing the ground-rent of Regent-street was brought into the market, do you think the ground would be worth more now than the Crown receives for it?—Yes, I think it would be worth more.

428. Can you at all state the amount of the increased value; what per centage would you put on the particular ground-rent if you were employed on the part of any person to sell or buy?—If a part of the ground in Regent-street was offered to me at four guineas a foot, I think I should not object to take it myself; but it is mere matter of opinion.

429. Are you of opinion, supposing the ground-rent were now to be sold of Regent-

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Regent-street, that it would fetch at a sale an increased price?—I cannot say, if all the street was to be let over again, and this was to be a speculation.

430. Suppose the ground, to the extent of 200 feet, in Regent-street, or 100 feet, was to be let, do you conceive that the present ground-rent or more might be obtained?—More would be obtained. I have heard as much as nine guineas a foot being given at the corner of St. James's-street; how they can give it I do not know. Considering the large property in Regent-street, there is no doubt they would get more for it now; if they got three guineas a foot for it at the time it was an entire speculation, of course, now it is not a speculation, they would get more.

431. Do you remember the Regent's Park before it was formed?—Yes.

432. Do you consider that the opening of this street from Waterloo-place to Regent's Park has greatly improved the property there and other parts of Mary-le-bone?—Yes.

433. In consequence of this street being formed and opened there, and there being a thoroughfare to and from those parts, do you conceive that the property there has been improved in value?—I do not consider the Regent's Park has been more improved by it than the adjacent property round Regent-street; the parish of St. James has been materially benefited by Regent-street passing through it.

434. Do you recollect when there was no way up to Welling's farm?—The direct communication would be up Portland-street. It has tended to improve the Regent's Park along with the rest.

435. You are valuing Regent's Park?—Yes.

436. What is the value put on it by you now?—I am not prepared to state that yet.

437. Looking at Regent's Park now, which was formerly Welling's farm, as a surveyor, will you state whether it is not greatly improved in value?—Decidedly.

438. Has it not improved to an extent beyond all calculation now?—If it was not for the Park itself, it would not be materially improved.

439. Must not the opening of the communication and the traffic leading through Regent-street from Waterloo-place to Oxford-street, have greatly improved that property?—It must have improved the property in the Park, there is no doubt about it.

440. Do you know that the object in making the street was to improve the Park?—I cannot say what the object was.

441. Have you seen the Reports of the Commissioners?—I have seen them, but not paid particular attention to them.

442. Is Regent's Park of any advantage to Regent-street?—Yes, I think a respectable neighbourhood is an advantage, because that brings people to Regent-street.

443. Do you not conceive that the rents in the rest of the parish of St. James are raised by Regent-street being formed?—The parish of St. James has always been valuable property.

444. Has it not been raised by the formation of Regent-street?—I think it has been raised in some instances, and in some instances it has been depressed.

445. In what instances depressed?—It has taken the business from those who are in the adjacent streets. It is injurious to the tradesmen, but to the private houses it is an advantage.

446. In affording what you consider to be a convenient thoroughfare?—Yes.

447. Do the remote parts of the parish of St. James derive any advantage from it?—No, I should say not.

Alexander Milne, Esq., called in; and Examined.

A. Milne, Esq.

448. YOU are one of the *ex officio* Commissioners of Regent-street?—Yes.

449. As Commissioner of Woods and Forests?—Yes.

449*. Before that you were Secretary to the Commission?—Yes, to the New Street Commission.

450. State what sum of money has been expended upon the formation of Regent-street, beginning at Pall Mall and going to Oxford-street?—From Pall Mall to the south end of Portland-place, the expenditure, in round numbers, has been about 1,500,000*l.*

451. Can you further state the sum expended in the formation of the Regent's Park?—The sum expended in Regent's Park, in the formation of roads, fences, planting and ornamental water, I should say, also in round numbers, about 80,000*l.*

452. Will you state what you consider to be the original value of the property

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before the formation of Regent-street, beginning at Pall Mall and ending at the south end of Portland-place?—I have no means of giving that information.

453. Can you state what is the actual rental on the 1,500,000*l.* laid out by the Commissioners?—The actual rental is about 35,000*l.* or 36,000*l.*, including in that sum the value of a considerable portion of Crown property in the line of Regent-street.

454. Can you state the proportion of that money or rent received from Oxford-street to the south end of Portland-place?—I cannot.

455. Does it bear any great proportion or what proportion to the rest?—I should think not quite one-seventh part.

456. Can you at all state whether the outlay in the purchase of property, not Crown property, in that district, was greater or less in proportion to the whole of the street?—It was greater in proportion on the south side than on the north side of Oxford-street, because there having been very few shops or places of business to the north of Oxford-street.

457. State what the Crown rent is now from Regent's Park?—About 15,000*l.* or 16,000*l.* a year.

458. Can you state what it would have been, had it continued to be let on any other plan than that adopted?—If it had been let for grazing, I think it would have been about 3,500*l.* or 4,000*l.* a year.

459. Do you conceive, from your general knowledge on the subject, that the property in the Regent's Park is much benefited by the formation of Regent-street?—I have no doubt that Regent's Park and Regent-street have benefited each other materially.

460. You cannot state what proportion one bears to the other?—No.

461. In addition to the 1,500,000*l.* which you say was expended in the formation of Regent-street, up to the south end of Portland-place, there was also another outlay for the formation of the road?—That was included in the 1,500,000*l.*

462. How much was that?—About 37,000*l.*

463. Was there some expense in the formation of sewers?—Yes, about 62,000*l.*

464. Is that included in the 1,500,000*l.*?—Yes.

465. Will you state how that 1,500,000*l.* was raised, or out of what funds it came?—It was partly from accumulations arisen from the sales of land revenue, to the amount of 300,000*l.* or 400,000*l.*, partly by monies borrowed from the Exchequer Bill Loan Commissioners, and from different public establishments, partly from Crown rents, and partly by the sale of other Crown property.

466. Do the inhabitants of Regent-street pay either principal or interest on that 1,500,000*l.*?—No, certainly not, except in ground-rents.

467. Not by rates?—Certainly not.

468. There is a debt upon Regent-street and Regent's Park, is there not?—Yes.

469. There is a debt contracted by the Commissioners of Regent-street, which is secured upon the rates of Regent-street, and so forth?—Yes.

470. What is the amount of that debt now?—About 61,000*l.* still due.

471. What was the utmost amount it ever was?—Ninety thousand pounds, exclusive of the 37,000*l.* expended by the Commissioners of Woods and Forests in the original formation of the pavement of Regent-street, and of 62,000*l.* on sewers.

472. You say the greatest amount of debt was 90,000*l.*?—Yes, of money borrowed.

473. Under the Commissioners of Regent-street, not the Woods and Forests?—The greatest debt of the Regent-street Commissioners was 90,000*l.*

474. Of which about 30,000*l.* is paid off?—Yes.

475. What is the rate of interest you pay upon the 60,000*l.*?—Four per cent. now, in all cases. Four and a half per cent. was paid for certain loans till very lately.

476. When was notice given to reduce the interest upon the loans to four per cent.?—In February last.

477. What was the cause of 37,000*l.* being advanced by the Commissioners of Woods and Forests to the Commissioners of Regent-street for the formation of that street?—The new street Commissioners were required by the 53 Geo. 3. to pave the street.

478. It was provided that that money should be laid out by them for paving, and in like manner 62,000*l.* for sewers?—Yes.

479. What caused the debt of 90,000*l.* at that time?—Partly M'Adamizing

Regent-street, and partly the expenditure in maintaining the M'Adamized road beyond the income, and partly in the foot paving in Regent's Park.

480. What proportion of the debt, can you say, was caused by the M'Adamizing Regent-street, and what by the foot pavement of Regent's Park?—I cannot state. I have never examined the details of the account so far as to be able to separate them.

481. Could it be furnished?—I think it probably could.

482. Why was Regent-street M'Adamized?—At the request of the inhabitants. Some of the inhabitants came to the office of the Regent-street Commissioners, and stated to them, about 1825, that they thought it would be a great advantage to them, in letting their lodgings, if the street was M'Adamized; that the street would be more quiet and agreeable to persons frequenting the shops, and passing through the streets.

483. Can you find the petition?—There was no written petition.

484. In consequence of that application, was the pavement taken off, and the street M'Adamized about the year 1825?—Yes.

485. Have you any recollection of the number of inhabitants that made application to you?—I cannot tell.

486. You do not know the fact?—I do not as to the numbers who applied, only that the application was made.

487. Can you state at all the comparative expense of paving and M'Adamizing?—According to the best information that I have been able to collect from the accounts of nearly ten years, I should say that the M'Adamizing is at least double the expense of pavement.

488. And of course greater in a great thoroughfare than in a less frequented place?—Yes.

489. Was there any engagement made with the parish of St. James when the first act for the formation of Regent-street was passed in 1813?—No other compact than what is set forth in the Act of Parliament, that the pavement of the street should be performed by the new street Commissioners.

490. Was there not a bargain made about taking a certain quantity of pavement on the payment of a certain sum of money?—That I think was three or four years after, not upon the first formation of Regent-street. The Act of the 56 Geo. 3. authorized the Commissioners to purchase the old pavement that belonged to the parish of St. James, and I know there was a negotiation for that purchase between some persons on behalf of the parish of St. James and of the Regent-street Commissioners, and I also understood that the price agreed upon was 7,000 *l.*; that price never was paid, and as far as I know, the pavement was never delivered.

491. Can you state the pavement never was delivered?—In consequence of communication received from the parish of St. James, of the 5th or 6th of May, I have had all the accounts of the parties who had the contract for paving Regent-street examined, to see whether he ever accounted to the Commissioners for any part of the old pavement, or whether any portion was disposed of, and I do not find that he has accounted to the new street Commissioners for any part of the old pavement.

492. Was that paving contractor a person of the name of Dupree?—Yes.

493. Is he alive now?—I do not know.

494. Were you a Commissioner at that time?—Yes, under the Paving Acts; not then a Commissioner of Woods, &c.

495. Have you any further means of prosecuting that inquiry?—No, I have done it as far as I had the means of doing it.

496. Was it part of your official duty to look into the accounts?—It was part of my duty to look into the accounts as far as regarded the application of the original 37,000 *l.* defrayed out of the new street funds; but after the passing of the Act of the 56th of Geo. 3, which substituted the Commissioners for paving Regent-street for the new street Commissioners, so far as regarded the paving of that street, I had no more to do with the paving expenses than any other particular Commissioner under the Act of Parliament.

497. Can you state whether or no the parish of St. James ever made application to the Commissioners of Woods and Forests for that sum of money?—Not till very recently.

498. You say this took place before 1820; was any application made till 1833 or 1834?—As far as I can recollect, no application was made from the time of passing the Act 56 Geo. 3, till within the last 12 months.

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499. You thought it your duty to look through all the accounts and to make such inquiry as you could, and you have not been able to discover, nor do you believe the pavement was ever delivered?—No, I do not.

500. What were the circumstances that led the adjacent parish of St. Mary-le-bone and the parish of St. Martin taking care of their own proportion?—At the time the Act of the 53 Geo. 3, was depending in Parliament, the Paving Committee of the parish of St. Mary-le-bone expressed a great desire to retain the pavement under their own management, agreeing to put it under the direction of the Paving Commissioners in all respects, and leaving them the jurisdiction with respect to porticoes and projections and various other matters over which the Paving Commissioners in other parishes exercise a control.

501. What were the circumstances that led to the arrangement with the parish of St. Martin?—In the parish of St. Martin there was a desire expressed on the part of the public that the portion of the communication from Regent-street to the Houses of Parliament, which passed through the parish of St. Martin, should be M'Adamized, and there were various communications between the parish surveyors and Sir James M'Adam on the part of the Regent-street Commissioners, to ascertain what sum of money should be contributed by St. Martin's parish towards the expense of that portion of the street.

502. Was there any attempt on the part of St. James's or St. George's parish to make an arrangement of a similar nature?—No, not to my knowledge.

503. Do you consider the parish of St. Martin has made a good bargain?—Sir James M'Adam stated to the Commissioners what he thought would be the actual expense of maintaining this portion of the road.

504. Was that made before the M'Adamizing of Regent-street, or after?—After, I believe.

505. Do you conceive the sum of money paid by the parish of St. Martin does defray the charge incurred by that part of Regent-street, &c., that belongs to the parish?—I should think not quite, but the fact may be ascertained.

506. With regard to Mary-le-bone, do you conceive the parish of Mary-le-bone does or not expend more money upon Regent-street within the parish than you expend on the other part?—There is less money expended on that part of Regent-street which is within that parish than on the other parts, because there is less thoroughfare in the Mary-le-bone portion.

507. Do you think it would be cheaper, supposing that the thoroughfare was the same?—No, I do not think it would.

508. Would you, on the part of Government, have any objection, either to require from the parish of St. James or St. George, a proportionate contribution to the rates of Regent-street, or throw on those two parishes the part of Regent-street within those two parishes?—I have no authority to undertake any thing, or to offer any proposal or suggestion on the subject.

509. Do you conceive that any arrangement could be made so as to secure the debt still due, 60,000*l.*, without incurring expense to the public with those parishes?—I know of no other mode in which the 60,000*l.* could be secured than by the rates imposed upon the inhabitants of Regent-street, Whitehall and Regent's Park, except by requiring contributions from the parishes of St. James and St. George towards the expense of keeping up Regent-street, considering those two parishes to be materially benefited by the formation of Regent-street.

510. Do you mean to say that the general rental of those two parishes has been increased by the formation of Regent-street?—I know the parochial rates are increased; but I have no means of ascertaining the gross general rental.

511. Supposing the houses, or rather the land on which the houses which formed Swallow-street and other streets, which are now pulled down, had not been improved by the formation of Regent-street, do you conceive that the parish of St. James or St. George would have so great a rental to levy their rates on as they now have?—I think not; the parochial rates are raised upon the rental, and those rates are increased.

512. I suppose they are more increased than to repay them fully for the period of time during which they derived no benefit from Regent-street?—Between 1813, when the Act for the formation of Regent-street passed, and 1820, there was a sum of 23,000*l.* paid by the new street Commissioners to the parish of St. James, to make good the deficiency in the parochial poor rates that had arisen during that period; and between 1823 and 1834 that sum of 23,000*l.* has been repaid to the

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Commissioners of Woods and Forests out of the surplus poor rates that have arisen within the parish since 1823.

513. Supposing any other arrangement is made, will the parishioners of St. James contribute to pay any thing to the Commissioners of Woods and Forests equal to what they assess upon the inhabitants of Regent-street?—I do not know.

514. Have you any claim upon them?—None whatever upon the parish.

515. You are quit upon that account?—Yes; the parish of St. James have repaid every thing they owed to the Commissioners of Woods and Forests upon that account.

516. That debt is paid off by the surplus rates; they have paid off that debt of 23,000*l.*?—Yes.

517. Bringing those two points to your recollection, do you conceive that the parish of St. James has or not been benefited by the formation of Regent-street?—I think it has.

518. Do you think it would be fair, considering Regent-street is one of the great thoroughfares to the several parishes of St. James and St. George, that they should contribute a sum for the keeping in repair, and so forth, Regent-street?—I think it would; I think it a great hardship on the inhabitants of Regent-street to have the whole of the rates for maintaining that street levied upon them.

519. Is it not the custom for all great thoroughfares to be paid for out of a general fund, and not local?—It is.

520. Do you see any circumstances in the case of Regent-street which militates against that principle being applied to Regent-street?—The debts being secured to the creditors upon the rates, I do not see any objection to it.

521. I wish to ask you more particularly as to the improvements which you conceive the parishes of St. James and St. George experience in consequence of the formation of the new street? Is not the new street nearly at one extremity of the parish?—Not of St. James's parish. I believe there is a great part of that parish on each side of Regent-street.

522. What do you conceive to be the advantage derived by the parish of St. George from Regent-street?—I conceive it has increased the value of all the houses abutting right and left upon the street.

523. What effect has it on the remote parts of the parish?—An inconsiderable effect on the remote parts of the parish.

524. Has it diminished the value of property at all?—I have never heard any complaint of that sort as to property within the parish of St. James. I have heard that it has diminished the value of property in Bond-street, but not the value of property in St. James's parish, and I think it has increased the value of property in St. James's-square, Burlington-street, Saville-row, Conduit-street, Marlborough-street, Argyle-street, Jermyn-street, and all the streets right and left of Regent-street.

525. What species of property has it improved in value? Is it gentlemen's houses or tradesmen's houses?—Gentlemen's houses rather than tradesmen's.

526. Has it not rather had an injurious effect upon shops than otherwise?—I have heard it so stated here to-day, but I had not heard such complaint before.

527. You stated that the improvement of Regent-street and Regent's Park added to the value of the one and to the other?—I think so.

528. The rents derived from the 1,500,000 *l.* laid out you now state is 36,000 *l.* a year?—Yes, including in that a considerable portion of Crown property which had run out of lease, or was nearly out of lease, at the time when Regent-street commenced, and which is no part of the 1,500,000 *l.* laid out by the Crown.

529. Has not the reversionary interest of the Crown been considerably improved by the buildings erected upon the property?—Certainly; but the present value of that reversionary interest would amount to a very small sum of money.

530. I think I heard from Lord Duncannon that the inhabitants of Regent-street agreed when they took their leases to pay these heavy taxes; that they took it with their eyes open, knowing that they would have to pay these heavy taxes; was that so?—The only parties with whom the Commissioners had any contracts were the builders who erected the houses, and who of course were aware of the terms upon which they took the ground.

531. They took it with their eyes open?—Yes.

532. That is the fact?—It is so.

533. It is not merely as to the paving and lighting, and cleansing and watching, but also there are parish rates; how do they stand with regard to the parish rates?—I have no means of knowing how they stand in that respect.

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534. I understood that together they paid 2*s.* in the pound?—That is for paving, lighting and cleansing.

535. That does not include the poor's rates?—No, not the poor's rates.

536. Only for paving, lighting and cleansing, 2*s.* in the pound?—Yes.

537. There was 1,500,000*l.* you stated to be laid out; did you take the value of the Crown property, as including the 36,000*l.* a year?—Yes, I did; I stated that there was 1,500,000*l.* laid out, and that there was also a certain quantity of Crown property in the line of the street, and which is included in the rental of 36,000*l.* a year.

538. Was the Crown property you allude to included in the estimate of the 1,500,000*l.*, or was it plus the 1,500,000*l.*?—Plus the 1,500,000*l.*

539. What amount do you think it was?—Perhaps 200,000*l.* would be too high; as some parts of the Crown property were on lease, I should rather say from 100,000*l.* to 150,000*l.*

540. Taking that into account, you would say that there was above 1,600,000*l.* applied in forming Regent-street?—Yes.

541. Do the occupying tenants hold under the Crown, or from persons taking leases?—A great portion under the persons who take leases from the Crown.

542. And the persons who took the leases under the Crown were aware of all the charges on the property?—They were.

543. The occupying tenants, were they aware of the charges that they were liable to when they took their sub-leases?—The Commissioners have very little communication with the occupying tenants till they come into the actual occupation of the houses; they have no means of knowing what may have previously passed between the occupiers and their landlords.

544. Then the rent paid is merely an affair between them and their landlords?—Yes.

545. As you go up from Pall Mall, do you not know that you get into the parish of St. George on the left hand street above Conduit-street?—Yes; there is a small portion of the street in St. George's.

546. I believe most part of the street is in St. James's?—Yes; only a very small part is in St. George's.

547. I believe the greatest part of the street belongs to the parish of St. James?—It does.

Lunæ, 27° die Julii, 1835.

SIR FRANCIS BURDETT, BARONET, IN THE CHAIR.

Alexander Milne, Esq., called in; and further Examined.

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548. ON the last day when you were examined, you were asked whether there was not a debt upon Regent-street, and what was the amount of that debt, and you stated it to be 61,000*l.* still due. Now by the Report made to the House of Commons, dated 16th August 1833, it appears you gave this evidence: you were asked, "Was Regent-street paved by contract?—It was. What was the amount of that contract, and when did it take place?—The contract was entered into in 1813; the expense of paving Regent-street, both carriage and foot pavement, including all repairs, from 1813 to 1824, when the pavement was broken up, was 28,193*l.* Was that the whole expense of paving?—Yes; the whole expense of paving and keeping in repair from 1813 to 1824. Who was the contractor?—Mr. Dupree. Was it afterwards M'Adamized?—It was. What was the cause of its being M'Adamized after having been paved?—In compliance with the request of the inhabitants. What was the expense of M'Adamizing?—The expense of M'Adamizing was 3,755*l.*, which was paid by the inhabitants. The inhabitants had the use of the materials?—They had. You are understood to say that no part of the M'Adamizing fell upon this office?—It was wholly charged upon the rates." Will you explain what you stated the other day with the evidence you then gave; you say it was done upon the

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the application of the inhabitants; was it not done under the authority of this Act of Parliament, the 6th section of 6 Geo. 4, chap. 38; was it not done under the authority of that Act?—No, I believe not.

549. You say it was not done under the authority of that Act?—No, I believe not; I believe it was done under the authority of the Act of 5 Geo. 4.

550. The section is to this effect: "Commissioners may break up pavement and replace the same with broken materials."—In that Act it extends the jurisdiction to other parts; the power to pave Regent-street was given by the Act of 5 Geo. 4; that is merely an Act extending the jurisdiction to other parts.

551. Was the new granite taken up and broken into pieces to form the M'Adamized road?—It was.

552. And the expense of putting down that granite was somewhere about 32,000*l.*?—I cannot state the expense from memory, I do not think I ever stated it to be 32,000*l.*

553. What did the pavement cost laying down; what is called pitching the stones in the road?—It was done by contract, I believe it cost about 10*s.* 10*d.* a yard; I cannot state the aggregate amount.

554. Did it cost 28,000*l.*?—It is stated that the foot and carriage pavement cost 28,000*l.*

555. You cannot state the cost of the formation of the carriage road?—No.

556. Is it not the fact that after it was laid down it was taken up again, and the very same stone broken into pieces to form the granite road?—It was.

557. Do you know what became of the stones that formed the road composing all the streets that were taken up?—I believe they were all broken and used, as far as I know they were; I am not acquainted with the details of that; I acted merely as one of a numerous body of Commissioners, and the details of the expense of M'Adamizing did not pass through my hands. The clerk of the Commissioners could give more detailed information upon the subject as to the expense than I can.

558. I thought you were the secretary?—Not after the passing of the Act of 56 Geo. 3, then I was one of the Commissioners of paving the street, and previous to that I was secretary to the new street Commissioners.

559. What were the names of the gentlemen who were secretaries?—Mr. Cornell was first, then Mr. Robertson succeeded him, who is dead, and Mr. Adams very lately has succeeded Mr. Robertson.

560. You do not know whether any part of the old pitched stones forming the ground was applied to the formation of the granite road in Regent-street?—I do not.

561. Under the 56 Geo. 3, authorizing the Commissioners to memorialize the Lords of the Treasury, and the third section gives a power to appoint additional Commissioners for carrying this Act into execution, and they are to be vested with the same powers and authorities as if they had been named in the Act. Now, having been a Commissioner and secretary to that commission, was any person ever appointed in addition to the other Commissioners under this power?—Yes.

562. Can you name whom?—I cannot recollect whom, the minutes are in the room and they might be read.

563. Were there any persons occupying in Regent-street?—There were.

564. Can you name them?—The late Mr. Robertson was a Commissioner; Mr. James Burton, who had large property in the street; Mr. Edwards Vaughan, who had large property in the street, and Mr. Edward Hopkinson, they are all in my recollection at present. There was Mr. John Holroyd also who had houses in the street, he was appointed one.

565. Can you name any inhabitant householders who were appointed upon the Paving Board?—I cannot.

566. Have any of them been elected members of that Board?—I do not remember any of the present inhabitants of Regent-street who are members of the Paving Board; I mentioned the names of those who were; Mr. Robertson is dead, and Mr. Hopkinson has left London.

567. Has any person been appointed in the room of those persons?—No.

568. Are you aware, that before the passing of the Act for the formation of Regent-street, the control of that part of the parish of St. James, now called Regent-street and Waterloo-place, was under the control of a Paving Board of the parish, which Paving Board was composed of inhabitants only who contributed to those rates?—I do not know how that was.

569. Did it never occur to you, that in consideration of the amount of rates paid by

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by the inhabitants of Regent-street, and the control of the funds they raised being transferred to another body, it would be only fair that a proportion of the inhabitants should be appointed members of that Board that they might have some control over the expenditure?—I never thought on the subject.

570. Do you not think it of any importance?—I did not think about it one way or the other; it did not rest with me to appoint the Commissioners.

571. You were one of the Board I believe?—I am now, I have only very lately become one of the Board of Woods and Forests.

572. I am alluding to the Paving Board?—I was a member of the Paving Board immediately after the passing of the Act of the 56 Geo. 3.

573. Did it never occur to you, being one of the members of the Board, and knowing the amount of the rates paid and the interest which the inhabitants of the street had which had been taken from the control of the parish, that it would be but fair to have some of them as Commissioners of the Paving Board?—At that time there was a portion of them in the Board.

574. Some of those are dead, and you have not supplied their places?—No.

575. You did not consider it necessary?—Since the death of Mr. Robertson and Mr. Vaughan there have been no persons living in the line of Regent-street appointed to supply their places.

576. You have not considered it necessary?—I have not thought of it one way or the other.

577. You have stated that the inhabitants of Regent-street were aware of the liabilities they were entering into at the time they took the ground, was that answer general, and was that the case with the United Service Club, or did not the Act of Parliament which brought them within your jurisdiction pass subsequently?—As far as I recollect, the Act of Parliament that brought the United Service Club into our jurisdiction passed previously to the United Service Club building the house.

578. Can you furnish the Committee with the date of the contract with the United Service Club?—I cannot from recollection; I should think it must have been about the year 1824.

579. I believe the Act that added Carlton Gardens to the jurisdiction was the 7 Geo. 4, and was, "An Act to extend to Charing Cross, the Strand and places adjacent, the powers of an Act for making a more convenient communication from Mary-le-bone, and to enable the Commissioners of Woods, Forests and Land Revenues to grant Leases of the Site of Carlton Palace?"—That Act of Parliament of 7 Geo. 4, extended to Charing Cross, the Strand and places adjacent, the powers of the Act of 5 Geo. 4.

580. So as to bring Carlton Gardens and the site of Carlton Palace into the jurisdiction?—That Act refers to plans that are not here; I believe it was by that Act Carlton Gardens were brought into the jurisdiction of the paving commissioners.

581. Subsequently to the taking the ground by the United Service Club?—Yes.

582. That was an Act authorizing the inclosing of Carlton Gardens, and that Act is, as I have shortly read, to grant building leases and inclosing Carlton Gardens?—Yes.

583. It is in 1826 and 1828 instead of 1824 and 1826?—Yes.

584 At the time that portion which is comprised in Map 5, where the United Service Club stands, was brought into charge, what was the amount of debt existing upon the whole of your jurisdiction and to which the United Service Club were rendered liable?—I cannot answer the question without reference to accounts and documents which are not before me.

585. You stated that the expense of paving and making the roads in the Regent's Park was somewhere about 80,000*l.* in round numbers?—Yes.

586. The doing that was authorized under the first Act, the 53 Geo. 3?—A portion of it was, but a great portion was not under the Act of Parliament, but by the authority of the Treasury, an application of the land revenues for the improvement of the Crown estate.

587. What money had been raised under the first mentioned Act which was applied under their authority; you had the power to raise 40,000*l.*, how much had been raised under the first mentioned Act of 1st May 1813, for paving and lighting Regent-street?—There was no money raised under that Act.

588. When

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588. When did the first portion of the 90,000*l.* raised under the authority of the several Acts come to be raised?—About the year 1825.

589. Between the years 1825 and 1828, when the United Service Club was brought under your jurisdiction, can you tell how much of that money had been raised and remained a debt up to that period?—I think about 15,000*l.*, as far as I can state from any thing now in my possession.

590. In 1825, there was 10,000*l.* borrowed?—Yes.

591. In 1826, there was 40,000*l.* borrowed?—Yes.

592. In 1827, 20,000*l.* borrowed?—Yes.

593. In 1828, 10,000*l.* borrowed?—Yes.

594. In 1829, 10,000*l.* borrowed?—Yes.

595. It is stated to me that 23,000*l.* was borrowed in 1825?—Ten thousand pounds is stated upon this Return to be borrowed in 1825.

596. In assessing the rates upon that portion of the new street which was comprised in Map 5, Carlton Gardens, was the assessment limited only to what would be required for the paving and lighting of the particular district, or was it with reference to the expenditure upon the whole jurisdiction?—The whole was considered as one district in the assessment.

597. Then the United Service Club became immediately liable, under this process, to that portion of the debt incurred previous to their being brought under the jurisdiction?—They stood in the same situation in that respect as all other property held under the jurisdiction of the Commissioners, as the property in Whitehall and Parliament-street, all that property to which the jurisdiction of the Commissioners extended.

598. Was that the case with every portion brought into your jurisdiction, or was it peculiar to this?—It applied to the whole.

599. Do you know what the sum raised in that jurisdiction might be? Was any separate account kept of what was raised?—I do not know.

600. At one time the accounts were kept separate, were they not?—I really do not know. I never kept the accounts or gave much attention to them.

601. It has been stated already that the rate charged upon the United Service Club was 180*l.* odd a year?—I do not know.

602. They have become liable, by being brought within your jurisdiction, to 180*l.* a year?—I do not know.

603. The Act of Parliament, in the first instance, made it compulsory upon the Commissioners to keep the accounts separate in each jurisdiction?—I do not recollect; I had not the charge of the accounts.

604. Are you quite sure it was before that last Act of 1832 that you were allowed to keep all the accounts together?—I cannot give any accurate information as to whether the accounts were kept separate or together.

605. With reference to the knowledge which the public had of the liabilities they incurred in taking ground in Regent-street after the Act of Parliament passed in 1813, authorizing the new street to be made, which contained a clause making it compulsory on the Woods and Forests to provide and form the roads, do you know that Parliament, by the Act of the subsequent year, the 54th Geo. 3, ordered certain advances to be applied for that purpose, certain advances to be made upon the credit of the land revenues of the Crown?—It is an Act, called "For the further Improvement of the Land Revenues of the Crown," which was passed 17th June 1814. The funds were authorized by Parliament, under that Act, to be applied for the purposes of the Act of the previous year for making the new street, and that Act of the 54 Geo. 4, authorizes the appropriating certain money for the purposes of the Act of the 53d Geo. 3, being the New Street Act.

606. For the purposes of that Act?—Yes.

607. Can you state what the sum authorized to be appropriated in making the new street amounted to?—I have already stated that the amount expended on the new street amounted, in round numbers, to 1,500,000*l.* I cannot give here any details of that expense.

608. Can you tell what portion of that was derived from estates of the Crown or the property of the Crown previous to the passing of the Act, and how much was contributed by the public: the whole 1,500,000*l.* was not the property of the Crown?—It was charged as a debt against the land revenues of the Crown.

609. The 400,000*l.* raised subsequently, and the 200,000*l.*?—Yes, certainly, every part of it.

610. By what Act of Parliament was it that those Parliamentary grants were

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made charges upon the revenues of the Crown?—They are charged upon the revenues of the Crown; and if the Crown should ever take the hereditary revenues again (at present the hereditary revenues of the Crown are applicable to the consolidated fund), then the consolidated fund would have the charge on itself.

611. The whole of the revenues of the Crown, previous to the formation of the new street, was appropriated to the consolidated fund?—They were.

612. Then this Act of 54 Geo. 3. was merely the advancing of so much money from the consolidated fund for the purpose of making the new street?—The produce of that being applied to the consolidated fund, the produce is equally applicable to the consolidated fund.

613. Any person dealing with the Commissioners of Woods and Forests for land subsequent to the passing of this Act of 54 Geo. 3. would have a right to calculate that the monies thereby appropriated for the purposes of the new street would be the fund to defray all the expenses, would they not?—I really cannot answer the question; it is hardly intelligible.

614. There was this fund appropriated by Parliament for making the street?—All the funds for making the street were appropriated by Parliament.

615. It was previously existing as part of the property of the Crown?—It partly had arisen from Crown property, all placed under the control of Parliament.

616. If the Crown should ever resume its property, am I to understand that the grants made of the whole previously existing property would be charged on the land revenues of the Crown?—Yes.

617. And must be paid off before it could be redeemed?—That is so.

618. When the money was borrowed under the authority of this Act of Parliament, were the funds applied at first towards the paving of Regent-street, the money borrowed previous to the United Service Club being added to your jurisdiction; had the money been applied in forming the pavement of Regent-street?—It had been applied under the powers of the Acts 56 Geo. 3. and 5 Geo. 4. generally.

619. In addition to the 37,000*l.* which had been expended out of the land revenues?—Yes, in addition to that sum.

620. Do you know what the rates chargeable upon the United Service Club-house on the ground taken as part of Carlton Gardens, what was paid to the parish before you let it?—No.

621. Do you know what sum was paid for that to the paving rate of the parish?—I do not know what sum was applied to that portion of the property.

622. All the money that was not applied in paving out of that money authorized by the 54 Geo. 3, was it not expended in the purchase of the freeholds of the houses?—Generally in carrying the improvements into execution.

623. Who had the benefit of the purchases made with those funds?—The land revenues of the Crown.

624. The Crown has the fee-simple?—Yes, the Crown has the fee-simple of the property purchased.

625. So much of the million and a half as was so expended was expended in adding to the revenues of the Crown this property which was so purchased?—Yes, the freehold property purchased became part of the estates of the Crown.

626. And with the exception of 37,384*l.* 10*s.* 11*d.* the whole of these funds were expended in adding to the property of the Crown?—They were expended in carrying the new street into execution, in various ways.

627. For the purchase of property, including compensation for good-will, it is said in the account rendered in 1829, the sum amounted to 1,104,183*l.* 10*s.* 5*d.*, that was an addition to the property of the Crown?—Yes, that was not all for freehold property, but that includes compensation for good-will and leasehold property also.

628. What portion would be for leasehold, and what for freehold?—I cannot possibly say.

629. There is a sum for the purchase of additional ground-rents, 27,598*l.*, that was also an improvement of the Crown estate, those ground-rents are added to the Crown estate?—They are.

630. Then there is payment for the consideration of exchange, 2,626*l.*, the payment of the difference between that and the property exchanged was for the benefit of the Crown estate?—It would depend entirely on the nature of the exchange whether the Crown estate was benefited or not, it might lose by it.

631. Was

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631. Was the 37,384*l.* 10*s.* 11*d.* the whole expense of the formation of the street up to the time of its being M'Adamized?—Yes, I believe so.

632. Was any part of the Crown property made subject to this improvement of the Crown estate applied towards those purposes after this period?—Not to the purpose of paving and maintaining the street after the passing of the Act of 56 Geo. 3.

633. Then the expense from that time fell wholly on the inhabitants?—Yes, certainly.

634. What portion did the Crown contribute, in respect of the million and upwards that was applied to the improvement of the Crown estate, to the purpose of paving, lighting and cleansing?—I have already stated, 37,000*l.*

635. Then the Crown contributed nothing afterwards?—Not after the 37,000*l.* except in respect of its own property placed under the jurisdiction of the Paving Commissioners, for which they pay always the same as private property does.

636. Does the Crown pay rates for gardens kept there?—They do.

637. Have they done so always?—The Crown pays rates for all its property in its own hands, for all public buildings, Whitehall Chapel, the Horse Guards, &c.

638. In the sites at Carlton Gardens, is there not a good deal of unoccupied space leading to the garden ground, and does the ground contribute towards the paving of any portion of the sites opposite the garden?—No, there is a garden-rate levied on the inhabitants.

639. The Act of Parliament requires that rates should be levied on all vacant and open space?—This open space is leased to the inhabitants of Carlton Gardens, with a qualified use of it.

640. At a ground-rent?—They have this accommodation, and the Crown gets an advantage from the tenant.

641. The tenant for this accommodation pays a higher rate?—No doubt.

642. Having paid a higher rate from the ground being so laid out, does the Crown, with respect to the gardens, pay any portion of the paving rate?—The Crown is not in the direct possession of the gardens, and they are not the parties contributing to it.

643. It gives the use of the garden to the tenants, but it has itself the fee simple?—Yes.

644. All that is demised is the use?—Yes.

645. And the fee simple remains in the Crown?—Yes.

646. All except the use remains in the Crown?—Yes.

647. The Crown would be the person to punish a trespasser who should go there?—A power is given to preserve the garden and punish trespassers.

648. As the law now exists, would not the United Service Club be liable to contribute for the money raised previous to their being added to your jurisdiction?—The United Service Club stands in the same situation as all other property placed under the jurisdiction of the Regent-street Commissioners; they stand in the same situation as the owners of all other property placed under the jurisdiction after the passing of the first Act of Parliament; there is nothing special in their liability.

649. What proportion of the entire street, which is not brought into contribution, is in Mary-le-bone parish?—About three-fourths of Regent's Park is in Mary-le-bone parish, and down to Oxford-street.

650. Is not that in the jurisdiction of the Commissioners?—No part.

651. Is not Langham-place?—No, as to the power of rating.

652. What is the expense of making the pavement which the Commissioners have to make, the pavement of the whole district down to Oxford-street?—I believe the parish of Mary-le-bone does it.

653. Do not the Commissioners keep it in repair?—Mary-le-bone parish keeps it in repair.

654. Do they pay a sum of money?—No, they keep it in repair.

655. What is the amount that is reimbursed to the Commissioners of Woods and Forests by St. Martin's parish?—Six hundred and thirteen pounds a year.

656. What expense might they be at with respect to that portion as to which they receive 613*l.* a year?—I cannot tell.

657. Is it not greatly exceeding 613*l.* a year?—I do not know. The 613*l.* was fixed by a communication between Sir J. M'Adam on the part of the Regent-street Commissioners and St. Martin's parish.

658. Mary-le-bone pay nothing?—They do not; they keep in repair their own road.

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659. As one of the Commissioners of Woods and Forests, can you explain to the Committee why it was the expense of forming the carriage road of St. Martin's and Mary-le-bone having been thrown upon those parishes, why an exception should be taken as to the inhabitants of St. James's parish?—I cannot answer that question.

660. Can you explain to the Committee how it was that that part of Regent-street and Waterloo-place situated in St. James's parish became an exception to the other parishes?—I believe it was with a view to the repayment of a portion of the 37,000 *l.* originally advanced by the public for the purpose of forming the pavement that the Act of Parliament passed, placing the pavement under the jurisdiction of the Regent-street Commissioners.

661. Was there a negotiation on the subject between the Commissioners of Woods and Forests and the parish?—There was an opposition in Parliament to the Bill for placing Regent-street under the jurisdiction of the Regent-street Commissioners.

662. On what account?—I can state that in the year 1814, the new street Commissioners represented to the Treasury that it would be but fair that the money laid out in the formation of Regent-street should be repayable out of the rates assessed upon Regent-street; and then the Act of Parliament passed, placing Regent-street under the jurisdiction of a separate paving board.

663. Are you aware what portion the Commissioners thought just that the inhabitants of Regent-street in the parish of St. James should pay?—I am not.

664. Was it the whole sum now demanded?—I cannot tell the sum; the subject was never considered in detail.

665. Before the parish consented to the Act of Parliament passing, the parish insisted that there should be introduced into the Act a clause making it compulsory upon the Crown to be at the expense of paving the street, and the parish was to keep it in repair afterwards; those were the terms upon which the parish consented to the Regent-street Act passing?—Yes.

666. In the fourth triennial Report made by the Commissioners of Woods and Forests to Parliament in the year 1828, it is stated that the sites of which leases have been either granted or agreed to be so, will produce the yearly sum of 34,582 *l.* 13 *s.* 9 *d.*, the estimated yearly value of the ground remaining to be let is 1,300 *l.*, the estimated revenue to arise from the sewer and paving rates is 3,400 *l.* per annum, making the whole yearly income to arise from the Crown property in and near the new street above 39,000 *l.* With reference to that, is any portion of the monies raised by the paving rates considered to be part of the property of the Crown; is it stated as a part of the yearly income of the Crown?—When that Report was made to Parliament, it was considered that the 37,000 *l.* laid out originally in paving Regent-street, and the sum laid out in the formation of Regent-street sewers, would be available to the Crown revenues; but it is not the case.

667. For what purpose do you levy these rates?—To pay the interest or a portion of the principal sum laid out in the formation of Regent-street and the Regent-street sewers.

668. When was the liability to contribute to cease?—When the debt was paid.

669. Has any part of the money, raised under the previous Acts, been applied to the paving beyond the 37,000 *l.*?—No.

670. Is any part of the paving rate considered as the land revenue of the Crown?—Not a shilling.

671. Then that Report made by the Commissioners was in fact never acted upon?—It was an estimated revenue, and that revenue has not been realized.

672. Was any part of the paving rate carried to the Crown?—It would have added to the amount of rate already much complained of.

673. You were one of the signers to the answer made by the Commissioners of Woods and Forests in May last to the petition of the inhabitants of Regent-street?—Yes.

674. The debt to which allusion is made in that reply; is it or not in any way connected with the debt incurred in the formation of Regent-street?—Not in any way whatever.

675. Is it not a debt entirely raised under different provisions of the Act of Parliament, entirely under the Commissioners of Regent-street, and not under the Commissioners of Woods and Forests?—Yes.

676. The Crown is in no way connected with that debt?—In none whatever.

677. Except

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677. Except as a debt upon property in which they have a reversionary interest?—Exactly.

678. That debt amounts to upwards of 60,000*l.*?—About 60,000*l.*

679. You cannot state precisely when the debt was originally raised?—It has been stated already from the Return made to the House of Commons.

680. I see by this Return there is 23,000*l.* raised in 1829?—I have no doubt that Return is correct.

681. Whence arises the difference between that Return and the Return made to the House of Commons?—There is no difference in the sum, but only as to the date.

682. Does it not appear by the Return, that in December 1825, the Commissioners of Woods and Forests lent a sum of 8,000*l.* to the Regent-street Commissioners?—They did for a short time.

683. Did they receive any interest?—No.

684. Has that 8,000*l.* been repaid?—Yes; the 8,000*l.* was repaid.

685. When was it repaid?—I have not got the date here when it was repaid.

686. You say that the United Service Club took the ground where their present house is built some time in 1824?—Yes, I imagine so.

687. The Act of Parliament authorizing the Commissioners of Regent-street to raise some of this loan was passed in 1825?—In 1827.

688. Under what Act of Parliament was it raised?—The Act of Parliament which authorized loans to be made, first passed in the 56 Geo. 3, that authorized monies to be borrowed; but the powers given by that Act to borrow money were not acted upon till the year 1825.

689. Then I understand you to say that the powers were in existence when the United Service Club took their ground?—Yes, certainly.

690. When was the United Service Club ground required to contribute to these rates?—In 1826.

691. Was there any representation made on the part of the United Service Club when this Act was going through Parliament?—None whatever.

692. They made no objection?—None whatever.

693. In what parish is it?—In St. James's parish.

694. Was not a portion of the money borrowed by public advertisement?—Yes, by public advertisement.

695. Do you consider that the best mode of borrowing it?—Yes.

696. And at the lowest rate of interest at which you could borrow it?—Yes.

697. Could you not borrow it lower in Exchequer bills?—No; we had borrowed as much in Exchequer bills as they were disposed to lend.

698. How much of that sum of money so borrowed was applied to the pavement of Regent's Park?—I cannot answer the question.

699. Have the goodness to state, in 1825, whether, on February 10th, there was not 5,000*l.* borrowed?—Yes, in two sums of 2,500*l.* each, and which 5,000*l.* is still due.

700. The present rate of interest being 4 per cent.?—Yes.

701. On May 4th were there not two other sums of 2,500*l.* borrowed, and also with interest at 4 per cent.?—Yes.

702. Was there not another sum, on the 7th November, borrowed to the amount of 5,000*l.*?—There was, which has been repaid.

703. And on 21st December 1825, the Commissioners of Woods and Forests lent you 8,000*l.*?—Yes, and that 8,000*l.* has been repaid.

704. Then, on 4th February 1826, did not the Exchequer Loan Commissioners lend you a sum of 12,000*l.*, of which 3,600*l.* is paid?—There has been 4,200*l.* repaid.

705. And on 15th April was there not also a sum of 15,000*l.* lent you by the Exchequer Bill Loan Commissioners?—Yes, there was that loan; 6,000*l.* has been repaid.

706. And on 13th January 1827, was there not a sum of 20,000*l.* lent you by the Exchequer Bill Loan Commissioners?—Yes, and of that loan 6,000*l.* has been repaid.

707. On the 15th March 1828, were there not five sums of 1,000*l.* each lent you?—Yes.

708. And they are still due?—Yes, still due; those last-mentioned sums were borrowed at an interest of 4½ per cent., and that interest has been reduced lately to 4 per cent.

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709. And were there not, on 2d May, five sums of 1,000*l.* each borrowed, making a total of 5,000*l.* more?—There were.

710. And was there not, in February 1829, a sum of 10,000*l.*, in two sums of 5,000*l.* each, borrowed?—There was.

711. And that still remains due?—Yes.

712. And that is the full amount authorized?—Yes.

713. With the exception of the last, all the sums have been borrowed before the United Service Club was added to the jurisdiction of the Commissioners?—They were.

Mr. *Robert Scace*, called in; and Examined.

Mr. *Robert Scace*.

714. WHAT are you?—Surveyor of pavements for the vestry of Mary-le-bone.

715. Did you, on 3d March 1835, deliver in this paper to the Office of Woods and Forests?—Yes.

716. By that it appears, in the year 1831, the cost per yard of the repairs of Oxford-street were 2*s.* 0¾*d.*?—Yes.

717. In 1832, 2*s.* 2¼*d.*?—Yes.

718. And in 1833, 1*s.* 11*d.*?—Yes.

719. And in 1834, 1*s.* 8¾*d.*?—Yes.

720. Can you at all state what the cost of Oxford-street was in the last year?—There is no return for the last year; I cannot put it down later.

721. Is Oxford-street more costly in repair than other streets in Mary-le-bone?—Certainly.

722. Why so?—Because there is more traffic.

723. Is that part of Regent-street in Mary-le-bone parish under your superintendence more or less costly than Oxford-street?—One-fourth only.

724. Is there more traffic in Oxford-street than upon that part of it?—Certainly.

725. Is there not more traffic in the lower part of Regent-street than in that part of the street in Mary-le-bone parish?—No doubt there is.

726. Is the amount of the traffic in Oxford-street, or in Regent-street coming down to Pall Mall, the greatest?—I think Oxford-street the greatest.

727. In point of number or weight?—In point of weight, and in point of number.

728. There is more wear?—Yes, the wear of that part of Regent-street is generally by carriages; Oxford-street is by waggons and carts; and it is much less along Regent-street in particular times of the day.

729. Can you state the rental of Oxford-street?—Fifty-two thousand eight hundred and sixty-six pounds.

730. What is the cost of Oxford-street alone, upon an average of the last four years, for lighting and paving?—That return does not include lighting; the cost of the pavement is 3,731*l.*; that is the average of the last four years.

731. Have you made out what that would be?—It would be about 1*s.* 4*d.* or 1*s.* 5*d.* in the pound.

732. Do you allow any thing for surveyors' and paviors' time?—Nothing of the kind; merely the expense, without any thing for superintendence.

733. In addition to the paving, must you not add some charge or other for superintendence?—There would be a charge, certainly, for superintendence; there would naturally be a charge.

734. Are you aware what proportion the rate bears to the real rental of Oxford-street; is it a rack-rent or a supposed rent?—All our rates are supposed to be on the rack-rent; but Oxford-street, from the exceedingly high rental, is not assessed generally at the rack-rent. In some cases I know it is not.

735. It is rather underrated than overrated, you think?—It is underrated. I know some houses that are considerably underrated.

736. What is your opinion of the relative wear and tear of a M'Adamized street and pavement, where there is a great deal of traffic, merely the repairs, without any consideration of the outlay?—I should think, generally speaking, from five to seven times as much. I have ascertained it is so in Mary-le-bone, it is five or seven times as much.

737. In Mary-le-bone, is not all the expense of the paving throughout the parish made one charge?—Yes, except some local districts, the highways, and some districts which are assessed by themselves. The paved streets are all under one assessment.

738. The

738. The paved and M'Adamized streets are all under the same charge, and no separate charge or rating?—Exactly.

739. That is the way it stands?—Yes.

740. That part of the parish that does not derive any benefit from Oxford-street is liable to the expense of Oxford-street?—Yes, all one rate.

741. You say the expense of Oxford-street is 2*s.* 1*d.* a yard?—Yes.

742. What does Portman-square cost a yard?—I should think about 8*d.*

743. Is that under the parish?—Yes. The square contains 8,027 yards, and the expense for four years was 477*l.*

744. Now the paved streets, with a moderate traffic; what does it average a year in the paved streets?—In 1831 and 1832 we M'Adamized a portion of the parish, and we paved a good deal of the Mews with the stones taken out of the new street.

745. How long have you been surveyor?—Nine years.

746. What was the average of the whole parish in 1831 and 1832?—In 1831, 2*d.*, and in 1832, 1¾*d.*

747. Have you made any new streets?—They would come under the new paving rate. It would have nothing to do with that at all.

748. How much would new paving a street come to?—From 10*s.* to 11*s.* a yard.

749. And making a M'Adamized road, how much does that cost?—From 5*s.* to 6*s.* In 1833, the expense was ¾*d.* a yard; in 1834, a ½*d.*; in 1831 and 1832 it was as much as 2*d.*, because we paved all the Mews.

750. Had you paving stones of your own, or had you any to purchase?—We had none to purchase. It is without taking any consideration of outlay. We have purchased no new paving stones for the last 10 or 12 years.

751. It is the paving of the streets you are alluding to?—Yes.

752. Is any part of Oxford-street in the parish of St. James or St. George?—Part is in the parish of St. James, St. George and St. Ann; but by a special Act of Parliament it is all thrown on Mary-le-bone. We assess both sides of it.

753. Are there any contributions made towards the repairs of Oxford-street?—We assess them. They do nothing towards the repairing. They pay the same repairing, lighting and cleansing rate that we do.

754. How do you keep the separate account of Oxford-street?—In this book we keep an account of the loadings of chippings, and we take the cost of labour and carriage, and we then ascertain how much a load of chippings costs, and for so many loads it is so much.

755. The part lately handed over to Mary-le-bone parish, the New-road, what does that cost per yard?—I cannot state at this moment, but I can ascertain it.

756. What sum do you receive from the parish of St. James for that portion of Oxford-street which is within the parish?—I do not remember what we receive from each individually. From the three parishes we receive 204*l.*, besides the assessment.

757. Do Mary-le-bone parish rate the houses, or receive any sum of money?—We rate them, and receive a separate sum besides.

758. What is the ground of your receiving a separate sum?—We some time ago received 500*l.* a year from the Trustees of the Metropolis Roads for the repair of Oxford-street; and when the metropolis roads were thrown on the parish, an arrangement was made that we should receive this sum from the adjoining parishes in addition. I do not know the rental of that portion which is in St. James's.

759. Did you say that you took the rates from St. James's for the houses in Oxford-street which are within the parish?—We rate them ourselves, and take them ourselves; and in addition to that, we receive from the three parishes on the south side of Oxford-street 204*l.* per annum.

760. Do you rate the part that is in St. George's parish in like manner?—Yes.

761. The houses in St. James's and St. George's are in the parish, though the pavement is not; do you assess for the whole rates?—For the repairing, lighting and cleansing rate; but they pay their own church and poor.

Mr. *Martin Farrell,* called in; and further Examined.

762. WERE you not the surveyor of pavements?—I was.

763. For how many years?—For 30 years.

764. Were you surveyor of pavements in 1816?—I was.

Mr. *Martin Farrell.*

27 July 1835.

765. Do you remember the period at which the jurisdiction of the pavements was handed over to the Regent-street Commissioners?—I cannot state precisely, about 1814 or 1815.

766. Do you remember any negotiation by the Regent-street Commissioners for the purchase of the old pavement of the parish?—I know nothing whatever of the negotiation.

767. Did you cease at that time, or about that time, to superintend the old pavements then on the site of Regent-street?—Yes.

768. What was done with it?—The parties building there took a part, and the contractor for paving the new street.

769. What was his name?—Dupree.

770. Was he the contractor to pave Regent-street?—He was.

771. He took some of this?—He did.

772. By whose order?—I cannot say by whose order.

773. Do you remember a complaint being made by the Commissioners of Woods and Forests with relation to a man who had the Hercules' Pillars taking some of the pavement?—Yes.

774. To whom did the Commissioners complain?—Mr. John Thompson, jun., son of one of the Commissioners of the new street, stated to me, that a person of the name of Keppel had taken seven feet of the old Purbeck paving in South Row, in St. James's Market, and had put it in a cart, with the view of taking it away, but on the representation of Mr. Thompson, jun. that it did not belong to him, he took it out of the cart and left it.

775. Had the paving continued the property of the parish, would it have been your duty to have taken care of it?—Most decidedly.

776. Had you ceased at that time to have any orders to do so?—I had.

777. You had no orders from the vestry to take care of it?—No, not from the Paving Board of the parish.

778. Had you any written communication?—No.

779. You say you were surveyor for 30 years?—Yes.

780. How long have you been out of office?—Since Christmas last.

781. Was the same man pavior for Regent-street as for St. James's?—He was.

782. What was his name?—Mr. Dupree.

783. Was he pavior for all the pavements in St. James's?—At that time he was.

784. How long did Mr. Dupree pave St. James's?—From 1809 to 1819.

785. And who has been the pavior since?—Mr. Johnson, of Horseferry-road, Westminster.

786. You never had any communication with respect to this pavement, except by verbal communication?—That is all.

787. Were the vestry in the habit of communicating verbally or by letter?—Verbally, to me.

788. You never had any written communication?—None whatever.

789. All the pavements of the parish were under your care?—They were.

790. Was it not equally your duty, without orders, as with orders, to take care of it?—It ceased to be so.

791. Was it not equally your duty to take care of all the pavements throughout the parish, unless you had special orders not to take care of it?—Not of that part; I considered it was under the control of the Commissioners of Woods and Forests.

792. Was it not your duty to take care of all the pavements throughout the parish of St. James, unless you had special orders not to take care of any particular portion of it?—No, I did not.

793. Did you have any orders whatever to take care, or not to take care of this portion of the pavement?—I have asked for information in those instances as to the man taking the pavement, and I have received none.

794. Of whom did you ask?—Of the Board assembled of the vestry.

795. What was their reply, did they state that the pavement had been sold to the Commissioners of Woods and Forests?—No.

796. Did they at any time whatever tell you not to look after the pavement?—They did not.

797. What were your reasons from abstaining for looking after it?—I had no instructions whatever.

798. Did

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798. Did you receive instructions to look after each street individually?—I did not.

Mr. *Martin Farrell.*

27 July 1835.

799. Why did you except this part of the parish from general supervision?—I considered it under the control of the Regent-street Commissioners.

800. Why?—Because they had taken the materials; there was one instance in 1815, in which they had disposed of the lamp-irons.

801. What did the Board say to that?—They took no notice of it; it was in St. Alban's-place, when the old buildings were disposed of by the Commissioners.

802. That you state as a thing within your knowledge?—I do.

803. You made a representation to the Board, and they said nothing at all about it?—No.

804. Did you suppose that these lamp-irons which the Commissioners sold were part of the bargain of the 7,000*l.*?—I do not know.

805. That was the ground upon which you ceased taking care of the pavements?—Certainly.

806. Did you consider you were discharged of all care of that pavement by any orders from the Board of St. James's parish, or did you know any thing at all what the bargain was between the parish and the Woods and Forests?—I considered myself not to have any control over it at that period.

807. Without having any orders on the subject?—Yes.

808. Did you measure and value the pavement?—No.

809. Were you ever called on the bargain to be made between the parish and the Woods and Forests to value the pavement?—I was not.

810. Was there any other surveyor of pavements at that moment?—Not that I am aware of.

811. Did you give the value of the pavement when disposed of, or did you receive any other instructions besides that?—No.

812. Who was clerk to the Paving Board at that time?—Mr. Wingfield, senior.

813. Is he alive or dead?—Dead.

814. You say the Commissioners took the materials and sold the lamp-irons, were they sold by auction or private contract?—To the best of my recollection, by auction; the lamp-irons were sold with the old buildings in St. Alban's-place.

815. Do you remember seeing bills posted up for the old materials to be sold?—Yes.

816. That is your impression?—Yes.

817. Your general impression was from not receiving instructions from the Paving Board to take charge of the pavement yourself, you considered it to be under your jurisdiction no longer, and that the charge of it was taken away from you?—Certainly.

818. And you considered that to be the property of the Commissioners of Woods and Forests?—Certainly.

819. That was your impression?—Most assuredly.

820. And you let them take it away?—Yes.

821. You do recollect, especially, the circumstance of an individual of the name of Keppel, who was about to take away some of the paving stones, and young Mr. Thompson, the son of Mr. Thompson the Commissioner, complained of it, and he discontinued it?—Yes.

822. And Mr. Thompson took possession of it?—The stones were taken out of the cart and left in possession of Mr. Thompson.

823. He took them, did he not?—Yes.

Mr. *Joseph Toogood,* called in; and further Examined.

824. CAN you tell the yearly amount of rates on that part of Regent-street and Waterloo-place under the jurisdiction of the Commissioners for Paving?—In 1834 and 1835 the paving-rates of the parish of St. James for one year ending Midsummer 1835 was 3,757*l.* 18*s.*

Mr. *J. Toogood.*

825. Is that the rate levied on the houses?—Yes.

826. In Regent-street and Waterloo-place?—Yes.

827. You do not take that as the rent received?—No, the rate when collected.

828. Now what is it in that part of Regent-street which is in the parish of St. George?—Paving, lighting and cleansing for St. George's is 253*l.* 4*s.*

829. Are you aware of the whole amount of the rate levied on the whole of the parish for paving, lighting and cleansing?—I am not.

Mr. *J. Toogood.*

27 July 1835.

830. Are you aware of the amount of rental and the rate levied by the parish on the inhabitants of Regent-street for poor's rates?—I am not.

831. Do you believe that it is calculated upon the same rate?—The same mode of rating.

832. Can you not state the amount?—I cannot give you any information as to the parish at all.

833. You are the collector of the rates from the inhabitants of Regent-street and Waterloo-place?—Yes.

834. Do you collect any other rate from the same inhabitants?—The water rate and sewer rate.

835. Can you inform the Committee what the separate amount of watering and sewage is?—The watering for 1834 and 1835 for St. James's parish was 313*l.* 3*s.* 2*d.*, and the sewer rate was 626*l.* 1*s.*

836. That sewer rate, I believe, is an annual one in Regent-street?—It is collected annually with the other rates.

837. It is an annual rate?—Yes.

838. Do you pay an annual sewer rate on your own house in Dufaur's-place?—I do not.

839. How often are you called on to contribute to the sewer rate for your own house?—I cannot say exactly; I think somewhere about once in two years.

840. Is it not sometimes a longer period than that?—It may be.

841. Do you pay four-pence in the pound for the sewers rate, or what do you pay in the pound?—Sixpence in the pound on the rack-rent to the Greek-street sewer.

842. You are not sure whether it is once in three years?—I cannot speak positively.

843. What do you pay for watering the streets?—I pay nothing, we do not have them watered; we cannot afford it in Dufaur's-place.

844. To your knowledge, have not some of the inhabitants of Regent-street and Waterloo-place complained to you, and appealed to the Paving Board, against the amount of rates charged upon them by order of that Board?—Many have complained to me, and I have directed them to conform to the Act by giving notice to the Commissioners, and they have been heard.

845. Do you not find heavy and general complaints against the assessment?—Frequently.

846. From almost every body?—No, many pay cheerfully.

847. Do you happen to know the method adopted by the vestry of the parish of St. James as to their mode of rating the inhabitants to the poor rate of the parish?—I do not.

848. Do you not know that the paving rate charged to all the inhabitants of St. James's parish, with the exception of Regent-street and Waterloo-place, is copied from the poor-rate book?—I cannot speak to my own knowledge; I believe there is no alteration in the rental.

849. You do not know?—I do not.

850. Do you know to what amount your house is rated to the poor?—Forty-five pounds.

851. Do you consider that the full value of the house?—Until Michaelmas last that was the rental of my house, on a 21 years' lease; from that period it has been 50*l.*; I now pay 50*l.*

852. Did you pay a premium for your house?—Not a farthing.

853. Did you lay out any thing in repairs?—Seven or eight hundred pounds.

854. That is besides the 50*l.* rent that you paid?—Yes.

855. Upon a lease for 21 years?—Yes, for 21 years; I have worked out one lease of the same house at 45*l.*, and now it is 50*l.*

856. Are you aware whether the sums of money you lent to the Commissioners of Woods and Forests are lent to the Paving Board, or to the Commissioners generally?—The Commissioners have some of my money, but I was not the origin of lending it.

857. Is it lent to the Paving Board?—It was lent by my trustees under my marriage settlement, in the name of the trustees.

858. From the evidence you gave the other day with regard to the rating of Regent-street, is it your opinion that they are not rated high enough?—I cannot give any opinion upon that.

859. Do

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Mr. J. Toogood.

27 July 1835.

859. Do you collect from the Regent's Park as well as Regent-street?—I do.

860. Waterloo-place and Whitehall?—Yes.

861. What is the total amount of your collection?—About 22,000*l.*

862. Have you any objection to state how you are remunerated, or at what rate you are paid for collecting?—Not in the least; 4*d.* in the pound.

863. I believe you are also the surveyor of pavements?—I am also the surveyor of pavements.

864. And you derive an income from that?—I do.

865. What is that?—One hundred pounds a year.

866. Is that without Regent's Park?—That is the whole the Commissioners give me, 100*l.* a year; the salary has never been increased; when I received the appointment, they considered that taking the two together, 100*l.* was a fair charge.

867. And besides that you have fees whenever the ground is opened?—Yes, that is part of my perquisites.

868. Is there any objection to your stating the full amount of remuneration you receive?—I have no statement of the fees.

869. Are you aware at the present moment there is a great deal of pavement under your superintendence that is in a very ruinous and dilapidated state?—A great deal of it.

870. It is?—Yes.

871. Can you state to the Committee how that has been occasioned?—By the very great wear in the street.

872. Is not a great deal of that occasioned by the Gas Light Companies taking up the pavement?—The Gas Light Companies when they take up the pavement are bound to replace it again.

873. Do you mean to tell the Committee, that you have made them replace all the stones that they have broken in the place they have taken up?—Yes, there are vouchers given in of their having done it.

874. Have you examined the place after the vouchers have been delivered to you?—In many cases.

875. Not in all?—No.

876. Suppose I were to mention to you a hundred places where 2,000*l.* would not replace it, do you think it would be extraordinary?—Yes.

877. Is Mr. Johnson, the contractor, to keep Regent-street in repair?—Yes, he is.

878. The carriage road?—No, not the carriage road.

879. What is the amount of his contract per annum?—I have a document to show that; it is in the office.

880. What office?—Under the care of the clerk of the Commissioners for paving Regent-street.

881. William Adams'?—Yes, William Adams'.

882. Do you know what is the amount of the contract for watering?—I do not; I never was at the making of any contract for the watering.

883. It does not come under your control?—No, it does not.

884. Can you state at all the actual value of No. 243, Regent-street, at the rack-rent?—The rental is 210*l.* a year.

885. What is the rent that that house is rated for to the Commissioners?—One hundred and forty pounds.

886. Was there or not any money given for the lease of that house?—I believe there was.

887. Now, No. 235, Regent-street, can you tell me any thing about the rent of that; that is Charles Viner's, one of the petitioners?—I cannot speak positively to that.

888. Now, No. 223 in Regent-street, can you tell me any thing about that?—That house is under peculiar circumstances, and I should beg not to answer that question.

889. Now, 238, is there any thing peculiar in that?—That is Thomas Carter's; I stated the rent of that was 240*l.*, at the last meeting.

890. What do you rate it for?—One hundred and thirty-six pounds.

891. What is the real rent?—Two hundred and forty pounds.

892. Can you state any thing about 192?—The rent is 250*l.*

893. What is that rated at?—One hundred and twenty-eight pounds.

894. Can you tell any thing about 190?—The rent of that is 300*l.*

895. What is that rated at?—One hundred and fourteen pounds.

896. Can you state any thing about 189?—That is partly rated in the parish.

Mr. *J. Toogood.*

27 July 1835.

897. What is the rate on which you collect?—Sixty pounds.

898. Do you know what the parish rate is?—I do not.

899. With regard to all the others, are they liable to any other rates but what they pay to the Regent-street Commissioners?—Some of them are.

900. Let us know what deduction you have on them all?—I cannot mention the particular number.

901. No. 243, is that rated to the parish?—It is not.

902. No. 235, is that rated to the parish in any way?—Part to the parish of St. George.

903. Can you tell what part?—I cannot; the line of the parish runs through it.

904. Now, No. 238, 136*l.* is the rate to the Commissioners and 260*l.* is the rent, how much of that is rated to the parish?—No part is rated to the parish.

905. Can you tell how much ground is rated to the parish?—No, I cannot. I believe a great part is rated to the parish; it goes into Vine-street.

906. No. 190, is that rated to the parish?—It is in part rated to the parish.

907. It is rated at 114*l.* and the rent is 300*l.*, is it not?—There is a part rated to the parish.

908. Now, No. 4, Regent-street, is that rated to the Commissioners or any part to the parish?—That is part of the Carlton Chambers; no part of that is rated to the parish.

909. What is the rental?—Two hundred pounds.

910. What is the rating?—Eighty-eight pounds.

911. Is there any other house in which you can show a considerable difference between the rating and the rental?—I have no other.

912. Is the parochial rating lower than the Commissioners' rating?—Y .

913. The Commissioners' assessment is on a higher rental than the parish?—Yes, 10 per cent.

914. Then the inequality between the assessment of rating is so much greater if the same sum had been raised from the parish upon the rental which the Commissioners of Woods and Forests have, instead of one-third it would be less than one-third?—Yes, it would be less in proportion.

915. Could you furnish me with the names of the parties who live in the houses you stated, 243 and 225?—Cumming & Co.

916. Who lives in 192?—John George.

917. Are all those corner houses?—No.

918. Who lives in No. 238?—Mr. Phillips.

919. And in 223?—Mr. Carter.

920. Who lives in No. 235?—Charles Viner.

921. And who lives in 243?—Mr. James Pett.

922. Do you think the difference of rate is the same between those houses and the houses in Regent-street which you have stated?—Yes.

923. They are charged on the paving rate and the poor rate, according to the precise value put upon them by the survey or of theparish, Mr. Mayhew?—Yes.

924. That is correct?—Yes.

Mr. *William Adams,* called in; and Examined.

Mr. *W. Adams.*

925. WILL you inform the Committee the number of square yards which Regent-street is composed of?—Twenty-four thousand. That is, the granite road way, from Pall Mall to Oxford-street.

926. I believe the part between Regent-street and the Quadrant is within the jurisdiction?—Yes, it is.

927. What are you, Mr. Adams?—I am clerk to the Commissioners for paving Regent-street.

928. How long have you been in that office?—Since February last.

929. Were you in the office before February?—I was in the office of the Woods and Forests, but not as clerk to the Commissioners of paving.

930. You succeeded Mr. Robertson?—Yes; and I occasionally during his long illness assisted him; but I have obtained but little general knowledge of the business, having been there merely as copying clerk.

931. I believe you were a clerk at the time Mr. James Roberts made an application to the Paving Board, and called their attention to the very bad materials with which the road was made?—I was acting for Mr. Robertson then.

932. Did you take any minute of what took place on that occasion?—I took several minutes.

933. Have

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Mr. *W Adams.*

27 July 1835.

933. Have you them here?—I am not certain whether the minute book was brought down or not; I believe it is not brought down. It was here on the two previous meetings.

934. Have you got the accounts of the receipts and expenditure of the Commissioners from the commencement?—We have not brought them down here; I delivered in an account of the expenditure during the last year.

935. For the two last years?—No, only for the last year.

936. How far will the books you have got here go back to?—To the 5th Geo. 4.; the minute books, but not the cash books. I have not brought down any of the account books. I have delivered in an account of the last year's expenditure, also for the 11 years previously.

937. Do you know whether, till recently, accounts of each separate portion of the district were kept separate?—Yes.

938. A separate account was kept of that portion of the district?—Yes.

939. When did you receive maps and plans that comprised the whole?—Not every map, some of them were divided into districts.

940. How many different districts are there?—Nine plans, but not so many districts.

941. The Regent's Park is one by itself?—Yes.

942. Was a separate account kept of the receipts and expenditure of that one district previous to Regent-street being added to it?—Yes.

943. Then that account will show the state of the account between the Commissioners of paving Regent's Park up to that period?—Yes.

944. When Regent-street was added to it, was Regent-street kept separate?—Yes.

945. Up to when?—Kept for the Commissioners' private information up to the present time. They are put altogether, the paving, watering, and the sewers.

946. Then the Commissioners have the means, for their private information, of distinguishing between them, and those accounts could be supplied?—Yes; I believe the account has been given to the inhabitants of Regent-street up to the year 1833 for their separate district, and I have told Mr. Roberts I could give it to him for two subsequent years.

947. You mean the receipts and expenditure?—Yes; the receipts and expenditure of Regent-street.

948. How far will the books go back?—The 5th of Geo. 4.

949. Does the account you have given in go back as far as that?—It does.

950. Do you do the M'Adamized part of the street by contract?—No; we purchase the stone by contract, as it required 400 or 500 tons at a time.

951. Who is the superintendent of the carriage road?—Sir James M'Adam. I would beg leave to state, with reference to the examination of Mr. Toogood as to the foot pavement, that it is not the cost for keeping it annually in repair, but it is so much a square yard of new pavement to be laid down. It would appear from his examination as if it was done annually.

APPENDIX.

A RETURN of the number of HOUSES and other Properties assessed to the PAVING RATE by the Committee for paving the Footway, Carriage Road, lighting, cleansing and watering of the Parish of *Saint Martin in the Fields*, the line of Road running from the East end of *Pall Mall*, i. e. *Powell's Buildings*, *Cockspur-street* and *Charing Cross*, to *Buckingham-court*; whereof the Carriage Road is now under the control of the Commissioners of His Majesty's Woods, &c. for paving and repairing, cleansing and watering the said Carriage Road.

The number of Houses on the above line of Road are 81.

	£.	s.	d.
The amount of Rental of the above Houses, on which the Assessment is made in the Paving Books	7,894	–	–
A Rate of Sixpence in the Pound on the foregoing Rent, produced for the entire Year of 1834	187	7	–
The Paving Committee of St. Martin's have to pay to the Commissioners of His Majesty's Woods, &c. for only keeping in repair, cleansing and watering the above M'Adamized line of Road, the large Sum of 653*l.* per annum, being equal to 8*l.* 1*s.* 11½*d.* per House, or 20*d.* in the pound on the above Rental, exclusive of lighting and keeping the foot pavement in repair	653	–	–
The superficial contents of the line of Carriage Road amounts to square yards	Yards. 7,463		

	s.	d.	
Charged at	1	7	per square yard M'Adamized.
	–	2	per square yard for watering.
	1	9	(*See* 13 sec. of the 2d of Will. 4. c. 56.)

The Amount of Rental on which the Paving Committee make their Assessments is	£.126,660
But the Amount on which the Poor Rate is assessed is	£.151,357
Being Two-thirds of the Rack Rental of the whole Parish, viz.	£.227,035

The deficiency arises from Scotland-yard, the Admiralty, &c. &c. not being under their jurisdiction, but under the Committee of Paving, &c. belonging to the Commissioners of Woods and Works, &c.

J. Farrant,
Clerk to the Committee of Paving, &c.

Paper delivered in by Mr. *Lees*, 22d July 1835.

A RETURN of the RENTAL of the Parish of *Saint George, Hanover-square.*

	£.	s.	d.
Amount of Rental of the parish of Saint George, Hanover-square, on which the Poor-rate is assessed	552,761	–	–
Amount of Rental of the Houses and Property being under the control of the Commissioners of Regent-street, so far as the Paving Rate is concerned, of the said parish	2,666	–	–

R^t Lees, Clerk to Paving Board.

Paper delivered in by Mr. *Rice*, 22d July 1835.

A RETURN of the whole RENTAL of the Parish of *Saint James, Westminster.*

	£.	s.	d.
Amount of the whole Rental of the Parish of Saint James, Westminster	247,293	–	–
Deductions allowed for empty houses, &c.	12,237	–	–
	235,056	–	–
Return of the Rental of the Houses and other Premises and Property in the parish of Saint James, under the control of the Commissioners of Regent-street	33,224	–	–

Henry Rice, Vestry Clerk.

Abstract Statement of Accounts for Paving, Lighting and Cleansing the *Regent's Park, Regent Street, Whitehall*, &c.

	For the Year ended Midsummer 1835.		For Eleven Years ended Midsummer 1835.				Arrears of Rates Uncollected.	Estimated Annual Expenditure.	Rental of Premises rated for Year ended Midsummer 1835.	Rate of Assessment, in Year ended Midsummer 1835.	Amount of Rates for Year ended Midsummer 1835.
	Receipt	Expenditure.	Receipt.	Expenditure.	Excess of Receipt beyond Expenditure.	Excess of Expenditure beyond Receipt.					
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£.	£.		£. s. d.
Balance in hand, Midsummer 1834	850 3 4										
Paving, Lighting, Cleansing, &c. the Regent's Park, Regent Street, Whitehall, Great George Street, Palace Yards, Carlton House Terrace, &c.	17,865 1 8	12,838 3 8	131,379 16 10	176,531 8 10	- - -	*45,151 12 –	21,237 7 4	14,200	184,284	at 2 *s.* in the pound 11,908 square yards, at 1 *s.* per yard	18,428 8 – 595 8 –
Watching the Regent's Park and Whitehall	60 19 1	- Nil -	7,290 6 6	11,644 9 7	- - -	4,354 3 1	494 10 5	Nil			
Watering Roads in the Regent's Park, Regent Street, Whitehall, Great George Street, Palace Yards, Carlton House Terrace, &c.	1,353 17 7	1,440 18 7	10,518 10 4	15,479 8 9	- - -	4,960 18 5	1,488 18 1	1,350	168,194	at 2 *d.* in the pound 11,908 square yards, at 1 *d.* per yard	1,401 12 4 49 12 4
Paving, Repairing and Cleansing the carriage-way of Cockspur Street and Charing Cross	295 8 –	731 10 1	1,243 15 10	2,224 2 1	- - -	980 6 3					
Watering ditto	31 2 –	74 – –	124 8 –	155 10 –	- - -	31 2 –					
Sewers	2,935 19 –	461 3 –	25,619 11 7	†7,824 15 11	17,794 15 8	- - -	3,389 5 9	500	178,261	*s.* *d.* at – 4 in the pound	2,971 – 4
Gardens, viz.—York Terrace, East	41 15 9	15 11 9	394 6 9	379 19 1	14 7 8	- - -	33 16 2	25	2,800	– 4 – ditto	46 13 4
ditto - West	42 4 7	13 14 6	377 11 3	365 1 10	12 9 5	- - -	27 2 6	25	2,554	– 4 – ditto	42 11 8
Clarence Terrace	11 16 1	12 16 11	103 14 11	207 15 5	- - -	104 – 6	6 19 –	10	985	– 3 – ditto	12 6 3
Hanover Terrace	45 5 10	15 2 9	329 7 1	417 2 7	- - -	87 15 6	33 1 8	20	2,440	– 4 – ditto	40 13 4
Sussex Place	80 14 6	30 6 11	538 15 9	683 8 7	- - -	144 12 10	96 13 9	30	3,168	– 6 – ditto	79 4 –
Nottingham Terrace	7 16 3	3 5 1	85 – 10	91 – 3	- - -	5 19 5	7 5 2	5	550	– 4 – ditto	9 3 4
Ulster Place	5 15 1	4 9 3	42 7 –	30 6 8	12 – 4	- - -	6 6 –	5	502	– 3 – ditto	6 5 6
Albany Terrace	9 3 4	5 4 10	41 17 6	40 14 10	1 2 8	- - -	6 15 10	6	260	– 6 – ditto	6 10 –
Cambridge Terrace	17 13 4	19 19 6	102 5 8	80 1 9	22 3 11	- - -	14 8 4	15	1,120	– 4 – ditto	18 13 4
Chester Terrace	99 7 6	95 13 5	321 6 10	581 11 2	- - -	260 4 4	254 12 6	60	9,550	– 3 – ditto	119 7 6
Kent Terrace	9 8 2	18 9 10	35 6 6	70 4 4	- - -	34 17 10	56 18 6	15	1,260	– 3 – ditto	15 15 –
Cumberland Terrace	44 10 –	57 14 11	143 16 11	252 8 8	- - -	108 11 9	103 16 5	30	3,710	– 4 – ditto	61 16 8
Cumberland Place	6 6 8	22 19 1	14 11 8	35 14 5	- - -	21 2 9	9 8 4	8	480	– 4 – ditto	8 – –
Gloucester Terrace	11 9 5	17 2 8	15 15 8	17 16 11	- - -	2 1 3	19 4 4	15	1,400	– 3 – ditto	17 10 –
Carlton House Terrace	91 4 1	70 – 10	171 15 4	182 7 –	- - -	10 11 8	58 7 –	70	11,517	– 2 – ditto	95 19 6
Richmond Terrace	197 1 8	117 10 –	1,410 7 4	1,376 16 –	33 11 4	- - -	92 6 –	130	2,215	1 8 – ditto	184 11 8
Park Square and Crescent	536 3 6	431 – 7	1,028 3 6	487 10 1	540 13 5						
Paving, Lighting, Cleansing, &c. Westminster Mews	65 8 5	114 11 11	575 18 5	838 – 11	- - -	262 2 6	299 16 7	115	1,150	2 4 – ditto	134 3 4
Paving, Lighting, Cleansing, &c. St. Martin's Mews	- - -	14 10 8	- - -	14 10 8	- - -	14 10 8					
Cleansing and Colouring Fronts of Houses	540 – –	601 14 2	642 12 –	784 11 2	- - -	141 19 2					
Loans	- - -	3,350 – –	90,505 8 6	29,200 – –	61,305 8 6						
Interest	- - -	3,850 – –	- - -	22,232 1 1	- - -	22,232 1 1					
£.	25,255 14 10	24,427 14 11	273,056 18 6	272,228 18 7	79,736 12 11	78,908 13 –	‡27,736 19 8	16,634			24,345 5 5
Balance in hand Midsummer 1835	- - -	827 19 11		827 19 11		827 19 11					
£.		25,255 14 10	£.	273,056 18 6	£.	79,736 12 11					

* In this sum is not included the expense of forming the Road of Regent Street, erecting Lamp Posts, &c. previously to Midsummer 1834, amounting to 37,401 *l.* 14 *s.* 6 *d.*, nor of the Roads in the Regent's Park, amounting to 9,413 *l.* 13 *s.* 9 *d.* both of which sums were paid by the Commissioners of Woods, &c.

† This sum does not include the original cost of the Sewer, which was paid by the Commissioners of Woods, &c. viz.—

For the Regent's Park	24,844 13 2
Regent Street	60,744 17 9
£.	85,589 10 11

‡ Nearly half of this sum is for the Half-year's Rate due at Midsummer 1835, the greater part of which will be collected; the remainder consists of Rates made during preceding years on Houses, which not being complete during those years were not liable to the payment thereof, or being unoccupied, were only liable to the payment of Half Rates.

Office of Woods, &c.
22 July 1835.

Wm. Adams,
Clerk to the Commissioners for Paving, &c. the Regent's Park, Regent Street, Whitehall, &c.

873/57

REPORT

FROM

SELECT COMMITTEE

ON

REGENT-STREET PAVING;

WITH THE

MINUTES OF EVIDENCE

AND

APPENDIX.

Ordered, by The House of Commons, *to be Printed*,
14 *August* 1835.

520.

875

REPORT

OF THE

SELECT COMMITTEE

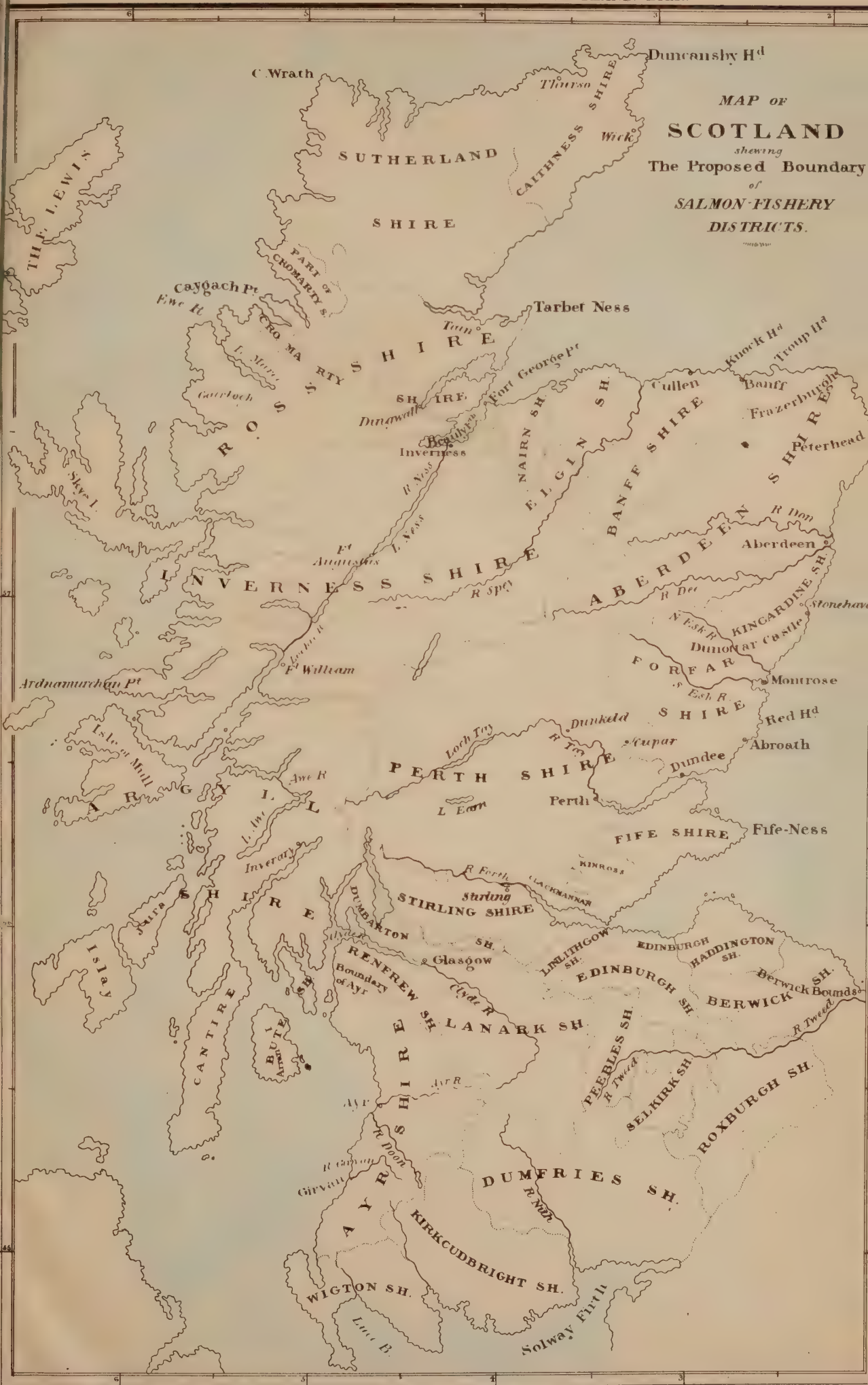
ON THE

SALMON FISHERIES (SCOTLAND) BILL.

Veneris, 21° *die Augusti*, 1835.

MR. *Patrick Maxwell Stewart* reported from the Select Committee on the Bill "to amend an Act of the Ninth Year of his late Majesty King George the Fourth, for the Preservation of the Salmon Fisheries in *Scotland*;" That they had examined the allegations of the Bill, and found the same to be true; and had gone through the Bill, and made Amendments thereunto: moreover that, for explanation of the several Salmon Fishing Districts mentioned in the Schedule annexed to the Bill, they had added to this their Report a Map of the Coasts of *Scotland*.

MAP



J. Arrowsmith, Lith.

601. Ordered by The House of Commons to be Printed, 4th Sept. 1835.
James and Luke G. Hansard & Sons, Printers.

REPORT

OF THE

SELECT COMMITTEE

ON THE

SALMON FISHERIES (SCOTLAND) BILL

Ordered, by The House of Commons, *to be Printed,*
4 *September* 1835.

601.